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PORTLAND SEED CO.

*Annual
Catalog*
1923



**DIAMOND
QUALITY**

SEEDS



SERVICE- In our various departments from fifty to one hundred competent men and women are actively engaged in serving our customers. Among these are practical experts, specially fitted by training and experience to confer with you on any subject pertaining to our business. Their suggestions or recommendations incur no obligation on your part, and may save you needless expense and disappointment. You should take advantage of this service.

WHAT OUR DIAMOND TRADE MARK STANDS FOR. By reason of our business standing and the experience gained by a quarter century of success in serving the growers of the Northwest, we have established trade relations with the world's best producers and sources of supply. Only by such connections is it possible, in the seed trade, to obtain the select true stocks—the best of the season's production; and when you see our **DIAMOND Trade Mark** on your packet of seeds or item of merchandise you can feel that it is a mark of real quality—**THE BEST OBTAINABLE.**

OWNING OUR GROUNDS AND BUILDINGS in the business center of Portland—with our house tracks easily accessible to all railroads—places us in the most advantageous position to render prompt, efficient and economical service.



PORTLAND, OREGON

Portland Seed Company's Catalog and Seed Annual for 1923



PORTLAND, OREGON

SEEDS for 1923—We offer standard varieties that are most satisfactory and profitable to the growers in our territory. We do not speculate in novelties but encourage the selection and improvement of varieties of known commercial value.

DIAMOND QUALITY SEEDS are grown from selected strains by the most careful and trustworthy specialists, under our own direct supervision. They are carefully cleaned and graded, then finally tested for germination and purity.

SEED GRAINS—The U. S. Grain Standards now make it impossible to market mixed varieties of wheat or other grains at the best prices, and growers will find it necessary and profitable to plant clean, pure seeds of standard varieties. (See grain section of this catalog for those best adapted to the Northwest.)

NORTHWESTERN GROWN SEEDS AND PLANTS—Improved varieties of our introduction—have stood the test of time and competition and are established standards in the coast markets. Earliest of All and Pride of Multnomah Potatoes, Golden West Sugar Corn, Oregon Yellow Danvers Onions, St. Valentine Broccoli, Oregon Yellow Dent Corn, New Oregon Strawberries, Riverside Giant Rhubarb—have won large returns for growers. They will win for you.

HOME GARDENS—Carefully planned and planted the Home Garden will produce through a long season a big supply of delicious fresh vegetables for the table and canning that will greatly reduce living expenses.

POULTRY AND BEES—If you have a yard raise chickens and keep bees. Eggs and poultry are the best of foods, and bees at no expense and with little care, will produce a plentiful supply of honey, the best substitute for and more wholesome than sugar.

OUR SEEDS ARE ALL TESTED in our seed laboratory for purity and germination and only those seeds that are above the standards are used. Our seeds are not sold on commission, therefore we do not have a quantity of unsold seeds returned to us or carried over. Packets are put up fresh each season and you can make no mistake in using **DIAMOND** Quality Seed.

WE TAKE THIS OPPORTUNITY of thanking our many customers for their generous patronage in the past, and to assure them that we will continue to do all in our power to merit a continuance of their confidence, and that we aim to give every order, no matter how small or how large, prompt and careful attention.

USE OUR SERVICE DEPARTMENT—Our suggestions and recommendations may help you to secure better results, save loss of time and protect you against unnecessary work and expense—a service that is free to you.

HOW TO OBTAIN OUR CATALOGS

An order from you, either by mail or in person, will insure your getting our catalogs.

If you have changed your address since receiving the last issue, we would appreciate your advising us.

PORTLAND SEED COMPANY



WHEN AND HOW TO ORDER

SEND in your combined orders for seeds, plants, supplies, etc., at once. We are prepared to fill orders as soon as this Catalog reaches you, and if you do not want all sent now we will send part now and the balance later. The advantage of this is that your order is entered and filled or stock reserved so the complete order or any part can be sent upon notice without delay. If you want part or all of your order held, state it distinctly with date when shipment is to be made. All orders for potatoes, plants and other perishable goods are carefully booked on receipt, and filled in rotation as soon as weather permits. If shipped early, they are at buyer's risk.

BE SURE TO SIGN YOUR NAME, giving Postoffice and State. **Do not write letters on the same sheet as orders.**

USE ORDER BLANK in the front of your Catalog, carefully filling out the blank spaces at the top for shipping directions.

KEEP A COPY OF YOUR ORDER. Check goods when received. We use the greatest care in filling, checking and packing orders, but in spite of all, mistakes may occur. Should any happen in your order, advise us promptly, giving order number, and same will be promptly rectified. Do not return goods until you hear from us.

PRICES. The prices named in this catalog are those prevailing at the time the catalog goes to press and are subject to market changes in value. Your order will be figured at the price prevailing at the time same is received and where lower you will be protected and refund made according to price. As prices usually advance on many items, toward the planting season, it will be to your advantage to **order early.**

OUR TERMS ARE STRICTLY CASH WITH ORDER where arrangements for credit have not been previously made.

SEEDS POSTPAID BY MAIL. We send all vegetable and flower seeds in quantities of ten pounds or less by mail, postpaid, to any Postoffice in the United States, at the prices named in this Catalog **unless otherwise stated.**


EXPRESS AND FREIGHT. Seeds sent by freight or express means that we deliver the goods to the express or railway company. The purchaser pays all transportation charges on goods. On moderate sized orders we advise express shipment rather than freight. Upon delivery of goods to transportation company, a sale is completed. In event of loss or damage to goods in transit the purchaser must have notation of such loss placed upon his receipt, and may then file claim for loss at his station, or may send the necessary papers to us when we shall gladly enter claim for him, remitting to him as soon as the claim is paid. **Remember that our responsibility ceases on delivery in good order to the transportation company, and it is therefore imperative that every purchase be carefully examined for loss or damage before receiving it.**

WE DO NOT GUARANTEE REPLACEMENT OF GOODS SENT BY MAIL. An additional remittance of five cents will insure any mail package.

PREPAY STATIONS. When you send in orders to go by freight or express be sure that you add money enough to pay freight charges if your station is a prepay point, which is **always the case where there is no regular agent.**

SPECIAL QUOTATIONS ON LARGE ORDERS. Any dealer, market gardener, institution or individual wishing seed in large quantities, is requested to mail us a list of what is wanted, and we will promptly return it with the **very lowest market prices.** **A letter of inquiry may save you dollars** if you want to buy in quantity. If in need of something pertaining to agriculture not herein listed, write us before ordering elsewhere.

COMPLAINTS OR PRAISES. If you are well pleased with our goods and the manner of doing business, tell everyone. If you are not, tell us, so we can please you. Our best efforts will be put forth in filling all orders carefully and promptly in a way that will please you.

 **SEND MONEY** by Postoffice or Express Money Order, Bank Draft or Registered Letter. Postage stamps will be accepted for small amounts. Money sent in any other way is entirely at sender's risk.

NOTE CAREFULLY that seeds in packets, pounds and ten pounds of one variety are **postpaid**; all other items are F. O. B. Portland, Ore., unless the price is stated otherwise, and money should be sent to cover transportation if sent to a station without an agent or if sent parcel post, balances will be promptly returned. A compliance with this will save expense and annoyance and insure quicker delivery. **Advise how you want your goods shipped.**

BE SURE TO ORDER EARLY—BEFORE STOCKS ARE DEPLETED.

Note—We use every precaution in procuring fresh, pure and reliable seeds, etc., but we, in common with other responsible seed houses, sell our goods subject to the following disclaimer, it being that adopted by the American Seed Trade Association, i. e.:—We give no warranty, express or implied, as to description, quality, productiveness or any other matter of any seeds, bulbs, trees or plants sent out and will not be in any way responsible for the crop. If the purchaser does not accept the goods on these terms they are to be returned at once.—Portland Seed Company.

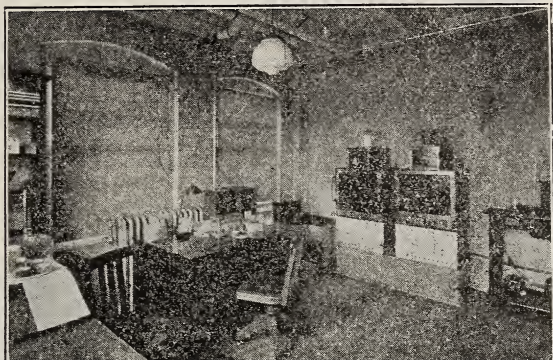
DIAMOND QUALITY SEEDS

ARE TESTED SEEDS

TO further guard the interests of our customers and maintain our standard of excellence, we have installed a modern seed laboratory equipped as recommended by the U. S. Dept. of Agriculture, placing in charge a certified seed analyst. It is here that final tests and inspections are made, and only those seeds that are above the standards are offered to the public, and bear our **Diamond Trade Mark**—the mark of quality that stamps them as the best obtainable.

You Can Protect Yourself

by planting "Diamond Quality" Seeds—
Tested for purity and germination—
They are above the standards of the pure seed laws.



We are the only Seed Company maintaining a seed laboratory in Oregon.

REFERENCE TABLES

Quantity of Seeds to produce a given number of plants and to sow an acre

	Quantity per Acre
Artichoke, 1 oz. to 500 plants.....	6 oz.
Artichokes—White French.....	8 bu.
Asparagus, 1 oz. to 800 plants.....	1 lb.
Asparagus Roots.....	7500
Barley.....	2 to 2½ bu.
Beans, Dwarf, 1 lb. to 100 ft. of drill.....	1 bu.
Pole, 1 lb. to 100 hills.....	½ bu.
Beet, Garden, 1 oz. to 100 ft. drill 6 to 7 bu.	
Mangel, 1 oz. to 100 ft. of drill.....	5 lbs.
Broccoli, 1 oz. to 2,000 plants.....	4 oz.
Brussel Sprouts, 1 oz. to 2,000 plants.....	4 oz.
Broom Corn, in Drills.....	15 lbs.
Buckwheat.....	½ to 1 bu.
Cabbage, 1 oz. to 2,000 plants.....	4 oz.
Carrot, ½ oz. to 100 ft. drill.....	3 lbs.
Cauliflower, 1 oz. to 3,000 plants.....	3 to 4 oz.
Celery, 1 oz. to 5,000 plants.....	4 oz.
Cheat.....	2 bu.
Chicory.....	4 lbs.
Clover, Alsike and White.....	8 to 10 lbs.
Alfalfa.....	15 to 20 lbs.
Crimson Trefoil.....	10 to 15 lbs.
Red.....	10 to 15 lbs.
Collards, 1 oz. to 2,000 plants.....	4 oz.
Corn, Pop (shelled).....	8 to 10 lbs.
Sweet or Field, hills.....	12 to 15 lbs.
For soiling drills.....	3 bu.
Cress, ¾ oz. to 100 ft. drill.....	1 lb.
Cucumber, 1 oz. to 100 hills.....	2 to 3 lbs.
Egg Plant, 1 oz. to 2,000 plants.....	4 oz.
Emmer.....	100 lbs.
Endive, ¼ oz. to 100 ft. drill.....	4 lbs.
Flax broadcast.....	¾ bu.

Grass—

Kentucky Blue, for pasture.....	1 to 2 bu.
Kentucky Blue for lawns.....	100 lbs.
Meadow Fescue.....	1 bu.
Mixed Lawn.....	5 to 6 bu.
Red Top, Chaff.....	1 to 2 bu.
Red Top, solid seed.....	10 to 15 lbs.

	Quantity per Acre
Grass—Continued	
Timothy.....	10 to 15 bu.
Orchard, Perennial Rye.....	1 to 2 bu.
Wood Meadow.....	1 bu.
Horse-radish Roots.....	15,000 to 25,000
Kale, 1 oz. to 2,000 plants.....	4 oz.
Kaffir Corn, in drills.....	6 to 10 lbs.
Kohl Rabi, 1 oz. to 2,000 plants.....	4 oz.
Leek, 1 oz. to 100 ft. of drill.....	4 lbs.
Lettuce, 1 oz. to 150 ft. of drill.....	3 lbs.
Mushroom Spawn.....	1 brick to 10 sq. ft.
Millet—For Seed.....	20 lbs.
For Hay.....	30 lbs.
Melon, Musk, 2 oz. to 100 hills.....	2 to 3 lbs.
Water, 4 oz. to 100 hills.....	3 to 4 lbs.
Oats.....	2 to 3 bu.
Okra, 1 oz. to 100 ft. of drill.....	8 lbs.
Onion Seed, for sets.....	60 to 85 lbs.
1 oz. to 150 ft. drill.....	3 to 4 lbs.
Onion Sets, 1 qt. to 40 ft. drill.....	8 bu.
Parsnips, 1 oz. to 150 ft. drill.....	3 lbs.
Parsley, 1 oz. to 150 ft. drill.....	3 lbs.
Peas, Field.....	2 bu.
Garden, 1 lb. to 100 ft. drill.....	1 to 2 bu.
Pepper, 1 oz. to 1,000 plants.....	2 lbs.
Potatoes.....	10 bu.
Pumpkin, ½ lb. to 100 hills.....	3 to 5 lbs.
Radish, 1 oz. to 100 ft. drill.....	10 lbs.
Rape.....	3 to 5 lbs.
Rye.....	1½ to 2 bu.
Salsify, 1 oz. to 100 ft. drill.....	6 to 8 lbs.
Spinach, 1 oz. to 100 ft. drill.....	8 to 10 lbs.
Sugar Cane, in drills.....	10 lbs.
Sunflower.....	8 lbs.
Squash—Summer, 4 oz. to 100 hills.....	3 lbs.
Winter, 8 oz. to 100 hills.....	4 lbs.
Tomato, 1 oz. to 2,000 plants.....	4 oz.
Tobacco, 1 oz. to 4,000 plants.....	3 oz.
Turnip, 1 oz. to 150 ft. drill.....	2 to 3 lbs.
Vetches.....	1½ to 2 bu.
With Grain.....	1 bu.
Wheat.....	1½ to 2 bu.

WEIGHTS OF VARIOUS ARTICLES

	Per Bushel
Artichokes.....	60 lbs.
Barley.....	48 lbs.
Beans.....	60 lbs.
Buckwheat.....	48 lbs.
Blue Grass—	
Kentucky.....	14 lbs.
English.....	24 lbs.
Canary Seed.....	60 lbs.
Cheat.....	34 lbs.
Clover Seed.....	60 lbs.
Corn, Shelled.....	56 lbs.
Charcoal.....	22 lbs.
Emmer.....	40 lbs.
Flax Seed.....	56 lbs.
Grass Seeds (unless otherwise stated).....	14 lbs.
Hemp Seed.....	44 lbs.
Hungarian Millet.....	48 lbs.
Lawn Grass.....	20 lbs.
Meadow Fescue.....	24 lbs.
Millet.....	50 lbs.
Oats.....	32 lbs.
Onion Sets.....	32 lbs.
Orchard Grass.....	14 lbs.
Peach Pits.....	48 lbs.
Peas, Smooth.....	60 lbs.
Peas, Wrinkled.....	56 lbs.
Perennial Rye.....	20 lbs.
Potatoes.....	60 lbs.
Rape.....	60 lbs.
Rye.....	56 lbs.
Red Top.....	14 lbs.
Red Top, Solid Seed.....	42 lbs.
Timothy.....	45 lbs.
Vetches.....	70 lbs.
Wheat.....	60 lbs.

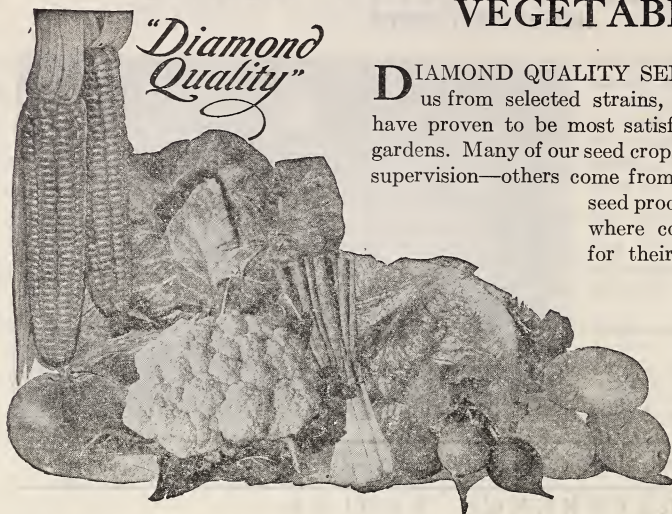
Number of Plants per acre at various distances

In planting trees the greater distance should be given in the richer soils

DISTANCE APART	Square Method	Triangu-lar	DISTANCE APART	Square Method	Triangu-lar
1 foot apart each way.....	43,560	50,300	15 feet apart each way.....	193	223
2 feet apart each way.....	10,890	12,575	16 feet apart each way.....	170	196
4 feet apart each way.....	2,722	3,143	20 feet apart each way.....	108	125
6 feet apart each way.....	1,210	1,397	25 feet apart each way.....	70	81
9 feet apart each way.....	537	620	30 feet apart each way.....	48	55
10 feet apart each way.....	435	502	40 feet apart each way.....	27	31

Diamond Fertilizers

will restore and sustain the productivity of your soil. They are an investment, not an expense, and will return many times their cost.



VEGETABLE SEEDS

DIAMOND QUALITY SEEDS are grown especially for us from selected strains, varieties that years of trial have proven to be most satisfactory for home and market gardens. Many of our seed crops are grown under our personal supervision—others come from the world's great centers of seed production of Europe and America where conditions are most favorable for their perfect development.



General Notes on Planting and Culture

WE have marked those varieties that **mature early** with this little Diamond, our trade-mark. This will aid you in the selections for your home garden.

If you live in **Northwestern Oregon or Washington** you will have better success with your garden by planting these early maturing varieties after the Spring weather is settled and the ground warm, than if you planted very early, as many seeds will not give the best results in the cold damp of the early Spring, and even if they live, the plants may be stunted and not grow. These suggestions are only general, as you will note that many special sorts can be planted very early.

If you live in the **Willamette Valley or Southern Oregon** you can plant almost anything as early as the condition of the soil will permit.

Do not work the soil when it is wet, as this has a tendency to make it lump and bake and may put it in such shape that nothing can thrive in it. Wait until it is just dry enough to crumble away nicely when turned over, and if you will press the dirt firmly down on the seeds, getting right in the row and tramping the soil down with your feet—they will germinate quickly even in comparatively dry soil. Any extra work in carefully preparing the soil will more than repay you in the increased results, and always remember that constant and thorough cultivation is almost equal to water and fertilizer both, and will insure a good crop even in a dry season, and on ordinary soil.

New land must be thoroughly broken up and cultivated in order to make a good seed bed, as new ground in the wooded sections of the Pacific Coast rarely produces bountiful crops the first few seasons without careful culture, fertilizing and rotation.

It pays to fertilize and cultivate to supply the necessary plant foods to the growing crops.

Fertilizers are not an expense but a profitable investment sure to give big returns if correctly applied and the cultivation and care of the crop is given proper attention.

Plan your plantings and keep a garden book or record of some sort, for by so doing you will get the utmost pleasure and profit from your garden and as the seasons pass you will find this record an invaluable aid and reference work. For if you keep a record you will soon learn what varieties are best for your requirements and to know your favorites, and when buying seeds or plants you will know just what to order.

If you are in **doubt** about what you should do, or want any special information, be sure to write to us. We will be pleased to give your inquiries our careful attention, and advise you to the full extent of our knowledge.

BOOKS AN UP-TO-DATE REFERENCE BOOK will save the beginner many times its cost and will suggest improved methods to the experienced. SEE LIST OF STANDARD REFERENCE AND TEXT BOOKS

ASPARAGUS

ASPARAGUS is one of the earliest Spring vegetables, and would be in universal use were it not for the mistaken idea that it is difficult to grow. In reality it can be produced very easily and cheaply and is a profitable market crop. A bed 15x50 feet, requiring about 100 plants, should give an abundant supply for the average family.

CULTURE—Soak seeds 24 hours in warm water, sow early in drills one foot apart. An ounce of seed will sow about 300 feet of drill. Keep the soil mellow and free from weeds. After one year's growth transplant into permanent beds that have been carefully prepared by working to a depth of 24 inches, manuring deeply, using old manure and bone meal; 5 feet is a convenient width for a bed that will carry three rows, and can be reached without treading upon it. Set the plants about 18 inches apart in the rows and spread the roots out, firming the soil down on them. If your soil is well drained the bed may be level, but if not it must be elevated a little. Give a good dressing of well rotted manure after planting and an occasional application of salt or brine. In the Fall when the foliage turns yellow, cut it off and give a dressing of manure or good commercial fertilizer. A warm, sandy soil is the best, and one which has for some years been cultivated in garden crops and heavily manured is greatly preferred to a fresh soil. But at no period of its growth should the asparagus crop be allowed to lack for manuring. From one to two years' time can be saved by buying roots of us. See plant department. 7260 roots will plant an acre.

You
Gain
A Year
by using
Plants



ARGENTEUIL

A popular French asparagus of great merit; larger and lighter in color and said to be superior to Palmetto; of vigorous, even growth: very early and free from disease.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, 1b. \$1.25

CONOVER'S COLOSSAL

A rapid grower producing large uniform stalks of finest quality. This is the famous "Bouldin Island" Asparagus, a superior canning variety, color light green.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, 1b. \$1.25



PALMETTO

The favorite green asparagus. Extra early and the uniformly large stalks remain tender longer than other varieties, being in prime condition for some days after coming above the ground. Palmetto is disease resistant, and a heavy, sure cropper.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, 1b. \$1.25

Asparagus Plants

Three Best Varieties as Above

ONE-YEAR-OLD PLANTS—Postpaid, 30c dozen, 75c per 50, \$1.15 per 100. By express or freight, 25c dozen, 60c per 50, \$1.00 per 100, \$8.00 per 1,000.

TWO-YEAR-OLD PLANTS—Postpaid, 40c per dozen, \$1.00, per 50, \$1.75 per 100. By express or freight, 30c per dozen, 75c per 50, \$1.25 per 100, \$10.00 per 1,000.

DIAMOND FRUIT FERTILIZER FOR ASPARAGUS Ask for Our Free, Booklet "Fertilizers"

Artichoke Large Green Globe

The variety used as a table vegetable. The edible portion is the thick end of leaf of the flower head. Sow early in drills and when about ten inches high transplant into rows four feet apart each way. It will produce only a small crop the first year, but will continue in good bearing five years. Cut before the bud opens. The seedlings are variable and for market gardening they are generally propagated from cuttings.

The buds when in blossom resemble huge thistles and the foliage being highly ornamental, this variety is much used for hedges and display in parkings.

Pkt. 10c, oz. \$1.25

Artichoke Jerusalem—White

Distinct from the Globe, belongs to the Sunflower family. Produces tubers like potato; grown in the same way. A fine vegetable for table and also valuable as hog feed. Price and description under Field Seeds.



Globe
Artichoke



BEANS

Prices postpaid—Pkt. 15c, ½ lb. 20c, 1 lb. 35c, 10 lbs. \$3.00

Wax or Yellow Podded Kinds

DWARF OR BUSH VARIETIES



PENCIL POD BLACK WAX

"Pencil Pod" is the most satisfactory of the earl dwarf Wax Beans.

Of dwarf, bushy growth, about fifteen inches high, large, luxuriant foliage, beneath which in great clusters will be found an enormous crop of beautiful straight yellow pods six to seven inches long, well rounded, deeply "saddle backed," meaty and solid clear through; they are brittle, of rich mild flavor, and **entirely stringless**. An early sure cropper; of the finest quality.

GOLDEN WAX

Very hardy and productive. A good second early variety of fine quality, but should be picked young to avoid strings.

DAVIS WAX

Rustless and immensely productive, very hardy and one of the best for market gardeners. The dried bean is kidney-shaped, clear white, and a favorite for baking and canning.



IMPROVED BLACK WAX

The standard early market variety, a sure cropper of good quality.

WARDELL'S KIDNEY WAX

Vines are of medium size, with long, flat pods of a delicate, waxy yellow, very brittle and entirely stringless when young. A favorite main crop variety with market men.

CULTURE—The soil best adapted for growing beans is a light, rich, well-drained loam, which was well manured for the previous crop. If the ground is too freshly manured the plants are apt to run to vines and set few blossoms. Plant in drills about two inches deep and from eighteen inches to two feet apart, as soon as the ground is dry enough and warm—about May 1st, or later, and for succession up to July 15th. Beans are very sensitive to cold and wet before they have sprouted, but are not so liable to be damaged after they are above ground.

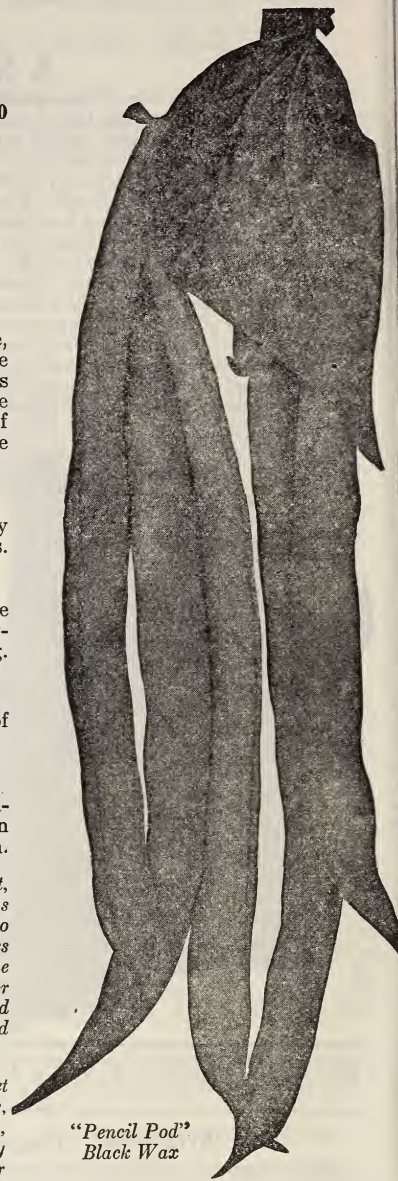
Plant about one pound of Dwarf or Bush Beans to 100 feet of drill, one bushel per acre. Pole Beans—one pound to 100 hills, requiring about one-half bushel per acre. When planted in hills, 2½ to 3 feet apart, small varieties such as "Navy" and "Lady Washington" will require from 16 to 25 pounds per acre; larger sorts running from 25 to 30 pounds. Owing to their short season of growth, from 60 to 80 days, beans generally make a profitable crop for trucking. After harvesting the beans, always plow the vines under to fertilize the soil.

In growing Beans commercially sufficient moisture, freedom from frost from the middle of May to late September, and thorough preparation of the soil with good cultivation, are the requirements for a profitable crop. Closer planting can be practiced where there is plenty of moisture and under dry conditions as too much moisture will not allow the crop to mature properly and close planting will often hasten maturity by absorbing the moisture, growing conditions being favorable.

Anthraxnose produces large, scabby, dead spots on the pods and the controlling measures are the selection of clean seed and spraying the plants with Bordeaux Mixture.

Powdery Mildew, showing a white growth of fungus covering the surface of the leaves, especially in rainy or damp weather, should be treated with powdered sulphur.

Cut worms and flea beetles can generally be controlled by the use of "Corona" Arsenate of Lead either sprayed or dusted on the foliage. See Sprays.



"Pencil Pod"
Black Wax

BEANS—Continued

Climbing or Pole Beans

Prices Postpaid

Pkt. 15c; $\frac{1}{2}$ lb., 25c; 1 lb., 35c; 10 lbs., \$3.00

CULTURE—Do not plant until the soil has become warm and the weather settled—and always remember beans should have rich, well drained soil. It is best to set the poles before planting; these should be six to eight feet high, rows about four feet each way.

Plant four to six beans to the hill and thin to two or three, depending on the variety. If trellis is used, sow in hills about one to two feet apart in the row. A pound should plant 75 to 100 hills. A top dressing of commercial fertilizer or old manure should be worked in when cultivating.

OREGON POLE LIMA

The only Lima Bean that will thrive in our cool climate

Oregon Pole Lima grows a strong, thrifty vine and is very prolific, bearing continuously until frost, the blossoms bursting from the top shoots in long panicles, while the pods can be seen in every stage of development, to the matured beans at the bottom of the vine. Pods are well filled, having three to five large beans of the finest quality.

Oregon Pole Lima can be planted in any garden soil as early as April or late as July. Give the same care and culture as other Beans, and they are ready to use when the pods are filled and first begin to ripen. They are at their best when the full green pods begin to turn yellow.

Try "Oregon Pole Lima." It is a wonder, sure to grow, and will produce more fine beans of delicious table quality than any variety we know of.

KENTUCKY WONDER

A vigorous climber; very prolific, bearing in clusters extremely long and very fleshy, succulent pods, flat, thick and remarkably tender. A first-class pole variety.

LAZY WIFE

Pods are from four to five inches in length, produced in large clusters in great abundance. Dark green, thick, fleshy and stringless of unusually rich flavor. Dry beans, pure white excellent for winter use.

OREGON GIANT GREENPOD (Dickenson's Yount)

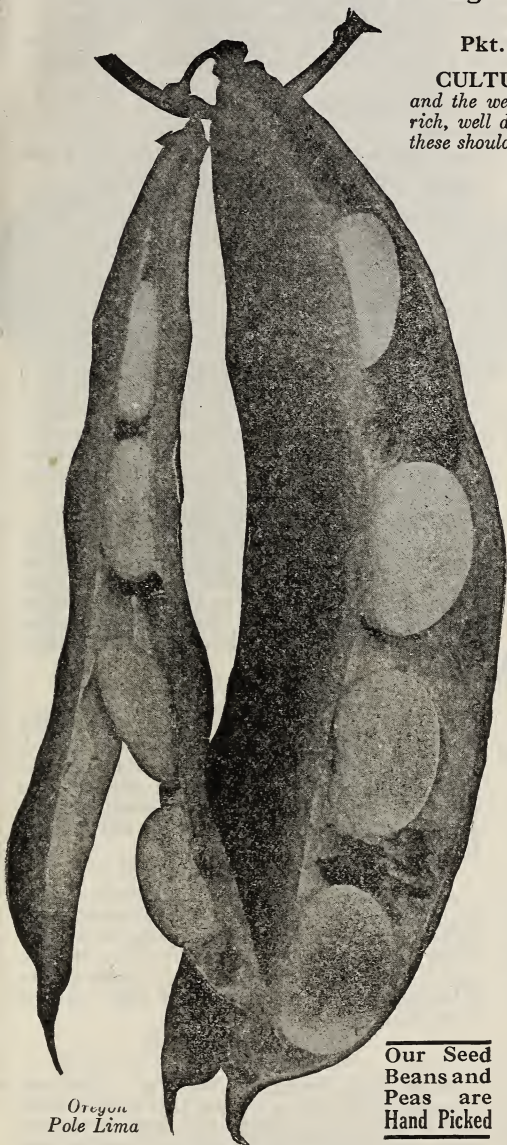
The large fleshy pods 10 to 12 inches in length are free from all stinginess and are tender, crisp and delicious. The size, splendid quality and rich flavor make this one of the most desirable beans for home gardens and for canning.

"Oregon Giant" is a strong grower and yields heavily, bearing its enormous pods in great clusters. The color is a light greenish yellow, splashed red.

Pkt. 20c, $\frac{1}{2}$ lb. 30c, 1 lb. 50c, 10 lbs. \$4.00

KENTUCKY WONDER WAX

The Pride of the Garden. It commences to bear when scarcely higher than the average bush variety, and keeps on producing until killed by frost. It is a rampant grower, one plant filling a pole with a mass of vines densely loaded with luscious beans. They are firm, entirely stringless, and when cooked, deliciously rich and buttery.



Oregon
Pole Lima

Our Seed
Beans and
Peas are
Hand Picked

ASPARAGUS BEAN

The True Asparagus Bean is superior to Kentucky Wonder in quality and fully equal in productiveness. The long, slender pods are very fleshy, almost round, crisp, tender and delicious, of a beautiful pale green color, attractive form and absolutely stringless. They grow vigorously and bear heavily.

SCARLET RUNNER

A favorite as a shell bean and for its flowers, which are bright scarlet; seeds broad and kidney shaped.



BEANS—Continued

OWING to our mild Winters and cool Summers, locally grown acclimated seed from properly selected strains will be found to give best satisfaction, in the Pacific Northwest. We are constantly testing and selecting the most dependable and profitable sorts and increasing our facilities and connections for local production, and when we offer a variety as being suited to your requirements and location you can accept it without fear of disappointment.

Dwarf or Bush—Green Podded Kind

Prices Postpaid

Pkt. 15c; ½ lb. 20c; 1 lb. 35c; 10 lbs. \$3.00



STRINGLESS GREEN POD

Extra Early

The finely shaped, long green pods are absolutely stringless, and are ready to market two weeks earlier than any other green-podded bean. It is of immense value, not only to the market gardener, but also for those who seek early beans of a rare quality for the home table. A splendid dried brown bean.

CANADIAN WONDER

This splendid bush bean is the largest, most prolific of the green-podded sorts, and is entirely stringless in its early development. Comes a little later than the New Stringless Green Pod, but continues in bearing throughout the season, and is excellent shelled green.

REFUGEE, OR THOUSAND TO ONE

Of great value on account of its hardness, vigorous growth and wonderful productiveness. Is not excelled by any other variety as a snap bean, and is considered the best for pickling or canning. Beans small, dark purple, veined brown. Pods of perfect form, dark green, veined purple.

DWARF HORTICULTURAL or "Cranberry Bean"

Grows erect, strong and shrubby, and is very prolific. The bean is highly prized, green shelled. It is rather large, plump and beautifully mottled yellow and red; one of the most delicious and desirable beans and a great favorite with market gardeners. The dwarf type of the old favorite London Horticultural Pole Bean.

LADY WASHINGTON

Sturdy, bushy plant, erect habit, and is a great improvement over the old "Navy," being much earlier, a little larger, and a very heavy yielder; being especially adapted to our Western soils, and is entirely free from disease. Bush attains a height of about 14 inches, and beans mature in September.

BROAD WINDSOR "Horse Beans"

Stalk erect, strong and shrubby. The bean is large, broad and flat; should be planted early and is best green shelled. A European variety, very hardy and can be planted earlier than other sorts. Grown extensively for stock in some sections.

CASTOR BEAN

(For Ornamental Varieties see Flower Seed)

Used for medicinal purposes and by some claimed to keep moles away. Castor beans are very ornamental, the plants and foliage being large and tropical in appearance.



Stringless
Green
Pod



EXTRA EARLY RED VALENTINE

This improved strain has a healthy, vigorous growth. The beans are small, but the pods are thick, round and fleshy: very tender, rich and quite stringless. A popular bean for canning green. Bush grows to a height of 15 inches and is very prolific.

TREE BEAN

Of sturdy branching habit bearing heavily and ripening early and evenly. The foliage is scant and usually falls before the pods fully mature. The distinctive pure white, rounded form and smaller size distinguishes this bean from other small white varieties and we consider it the most desirable for Northwestern growers. The cooking and table qualities are unsurpassed.

For BEANS use 350 pounds per acre of our
Diamond Vegetable Fertilizer

Ask for our Free Booklet "Fertilizers"

Mulford Cultures For Beans

increases the yield, enriches the soil. Garden size 35c, acre \$1.50, 5 acres \$5.00, postpaid.



BEETS

CULTURE—The Beet is hardy and may be planted as soon as the ground can be well prepared, doing best in rich, sandy soil, sown in rows sixteen inches apart, covered one and one-half inches deep. The seed will sprout better if soaked twenty-four hours in warm water before planting. Thin out by using the largest ones when they are of sufficient size, continuing until they are six or eight inches apart in the rows. For field crop, the rows should be far enough apart to permit the use of a horse cultivator. Prices below, postpaid.



P. S. CO'S MARKET GARDENER

This new, extra early Beet is remarkable for its fine quality and rapid growth; it is of deep red color and handsome shape; as an early market sort it is unrivaled. It is to a large extent superseding the Egyptian, being earlier in development, more attractive in appearance and of superior quality for the table, holding its color and cooking quickly. Market gardeners prefer it as it matures evenly, stands a long time and does not split.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.50

DETROIT DARK RED TURNIP

A fine Beet for bunching for market: tops exceptionally small and uniformly upright. The roots are perfect turnip shape with small tap-roots. One of the deepest red beets. Quality is of the finest: sweet and tender, one of the best beets for home gardens.

Pkt. 10c; oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

EARLY ECLIPSE

One of the best early sorts. It possesses all the qualities requisite in a first class beet, and is of a uniform, globular shape. The roots are a bright, glossy red, fine-grained and delicious.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

SUGAR BEET

Klein Wanzleben—This is the standard variety grown commercially for the production of sugar.

Pkt. 10c, $\frac{1}{2}$ lb. 45c, 1 lb. 80c, 10 lbs. \$7.50

Lane's Improved Imperial Sugar—Large thick, tapering variety. Yields almost as much as mangels. Is sweet and rich and very desirable for stock.

Pkt. 10c, $\frac{1}{2}$ lb. 45c, 1 lb. 80c, 10 lbs. \$7.50

EARLY BLOOD TURNIP—IMPROVED

An extra selected stock of blood turnip having larger, coarser tops and roots than the Detroit Dark Red, and requiring a longer time to mature. Excellent for Summer and Autumn use.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

EXTRA EARLY EGYPTIAN

The best variety for forcing, and for market gardeners, being very early with small tops. Roots very dark red, rounded on top, but flat beneath, with very small tap roots.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

LONG SMOOTH DARK BLOOD

The leading late variety, keeping well all Winter. Should be planted in rich, warm soil to secure rapid growth, which makes them tender. Top small, root long and smooth. Flesh deep purple, fine and sweet.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

HALF LONG BLOOD

A new variety of excellent quality. One of the very best for Winter use; does not become woody and keeps as well as the Long Dark Blood. The root is smooth and handsome, and the flesh is brilliant in color and as good in quality as the best Blood Turnip varieties. Give it a trial.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

Use Sulphur in connection with your fertilizers and make your soil give you the highest possible returns. It is a first class fertilizer, fungicide and insecticide. See Index.

BEETS—Continued

MANGEL WURZEL



Yellow Giant

Sludstrup

Golden Tankard

Eckendorf

These are grown extensively for stock feeding, and afford large quantities of fresh, nutritious and wholesome food during the Winter months, in connection with grain and dried forage. Sugar Beets are richer and sweeter than Mangels, but do not produce as heavily.

CULTURE OF MANGEL AND SUGAR BEETS—Thoroughly fine soil as good roots cannot be grown in lumpy, poorly prepared ground. The largest crops come from a soil ranging from light to a friable clay loam that has received from eight to fifteen loads of manure to the acre. This can be plowed in or half broadcast and half used in the furrows; a deep plowing in of fresh manure in the Fall is best. It is also necessary to add some commercial fertilizer, but any good soil will grow a fair crop.

Use 6 to 10 pounds of seed to the acre, depending on whether machine or hand planting is used, planting liberally so that in thinning an even stand can be secured. The rows can be 18 to 30 inches apart, depending upon soil and method of culture. Level culture is best. If planted during dry weather, be sure the seed is in from one and one-half inches as it requires lots of moisture to burst the hard shell.

A poor stand and weak germination is often due to improper planting and lack of moisture. Transplanting can be successfully done to fill vacancies. Do this before a shower, and early, breaking off the tops of the larger leaves.

P. S. CO'S HEAVIEST CROPPER

This is a wonderful improvement on existing stocks of Yellow Mangels, being one of the heaviest croppers and easiest pulled, of very fine quality. The small foliage permits it to be left comparatively thick in the rows and weight per acre is therefore enormous. It is considered distinct over all other kinds and one of the largest and best Yellow Mangels.

Pkt. 10c, $\frac{1}{2}$ lb. 50c, 1 lb. 90c, 10 lbs. postpaid \$7.50

YELLOW GIANT, INTERMEDIATE or Gate Post

Roots very large, growing over one-half out of the ground; flesh white, sweet and tender; tops bright green, comparatively small; neck small short. Its fine flesh never becomes woody and the crop is easily harvested.

Pkt. 10c, $\frac{1}{2}$ lb. 40c, 1 lb. 70c, 10 lbs., postpaid \$6.50.

GIANT RED ECKENDORF

Is of straight, cylindrical form, very blunt, and grows mostly above the surface. Awarded a first-class certificate as a very heavy cropper.

Pkt. 10c, $\frac{1}{2}$ lb. 40c, 1 lb. 70c, 10 lbs., postpaid \$6.50.

MAMMOTH LONG RED

An improvement on the Long Red, with ordinary cultivation. If you want a large crop of large Mangels of good quality, don't fail to try this sort. Very uniform, smooth and of good shape. Should be grown in deep loose soil.

Pkt. 10c, $\frac{1}{2}$ lb. 40c, 1 lb. 70c, 10 lbs., postpaid \$6.50.

NEW MANGEL HALF SUGAR

A new variety, more valuable for feeding purposes than the old sorts, yields as much per acre as the best Mangels, and twice as much per acre (bulk of roots) as the rich sugar beets. Roots large, very smooth, with few rootlets; creamy white in color, with medium sized tops.

Pkt. 10c, $\frac{1}{2}$ lb. 40c, 1 lb. 70c, 10 lbs. postpaid \$6.50.

GOLDEN TANKARD

Dairy farmers state they are able to obtain a higher price for milk when feeding cows on "Golden Tankard." Sheep thrive on it. "Golden Tankard" is a rich, deep yellow throughout. Early, hardy and a heavy cropper.

Pkt. 10c, $\frac{1}{2}$ lb. 40c, 1 lb. 70c, 10 lbs. postpaid \$6.50.

DANISH SLUDSTRUP

Long, reddish-yellow, grows well above the ground, and is easy to pull. Has repeatedly been awarded a first class certificate by the Danish Government.

Pkt. 10c, $\frac{1}{2}$ lb. 40c, 1 lb. 70c, 10 lbs., postpaid \$6.50.

SWISS CHARDS

New Savoyed Leaf "LUCULLUS". An improved variety of "Swiss Chard," growing about two and a half feet high. The heavy stalks are over an inch thick and bare for more than a foot of their length. The leaves make the finest of "greens." By cutting back the leaves close to the ground tender shoots spring up quickly, these or the mid-rib are very delicious cooked as asparagus. Swiss chard is hardy, easily grown and should be in every garden. It is one of the most delicious of all vegetables.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 65c, 1b. \$1.75

BRUSSELS SPROUTS

The plants, which are very hardy, grow two or three feet high, and produce, from the sides of the stalks, numerous little sprouts, which resemble very small cabbages one or two inches in diameter. The leaves should be broken down in the Fall, to give the little heads more room to grow. They should be treated in all respects like Winter Cabbage or Kale.



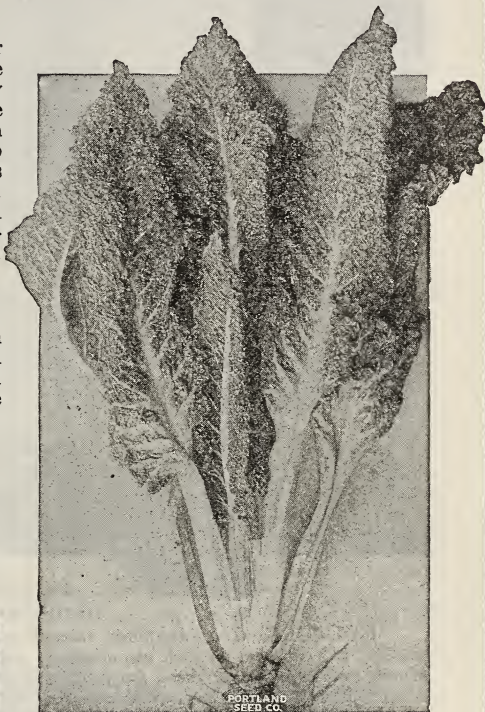
Odense Market

DWARF IMPROVED

A carefully grown strain, very hardy and giving compact, round sprouts of large size and good quality.

Pkt. 10c, oz. 40c, $\frac{1}{4}$ lb. \$1.25.


"Cabbages, Cauliflower, Broccoli,"
by Gregory. Price
per copy, 45c.

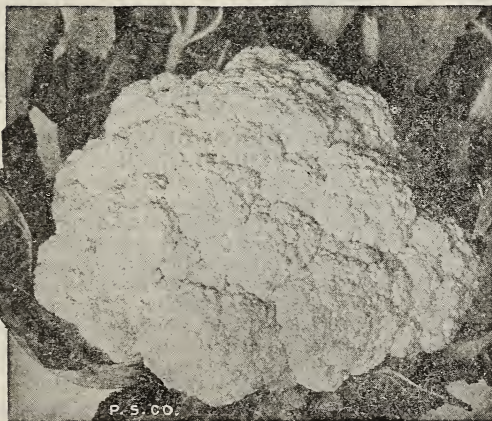


Swiss Chard "Lucullus"

BROCCOLI or Winter Cauliflower

Broccoli is so nearly related to late Cauliflower that the varieties are often listed under both heads—the principal difference being in the hardiness and time of maturity, Broccoli not heading until late Winter or early Spring. Culture is same as for late Cauliflower, and good, rich, well-drained bottom land is best, but well-tilled, well-fertilized upland will produce a good crop.

 The *St. Valentine Broccoli*, which we introduced some years ago, is the variety extensively grown by commercial planters—many carloads being shipped from Oregon each season.



St. Valentine Broccoli

ST. VALENTINE—The Finest of All Broccoli

This grand new strain introduced by us is a sure header of immense size, finest quality, and is ready for market in February. The large, solid, handsome, white heads remain in good condition longer than other varieties. Crop failure.

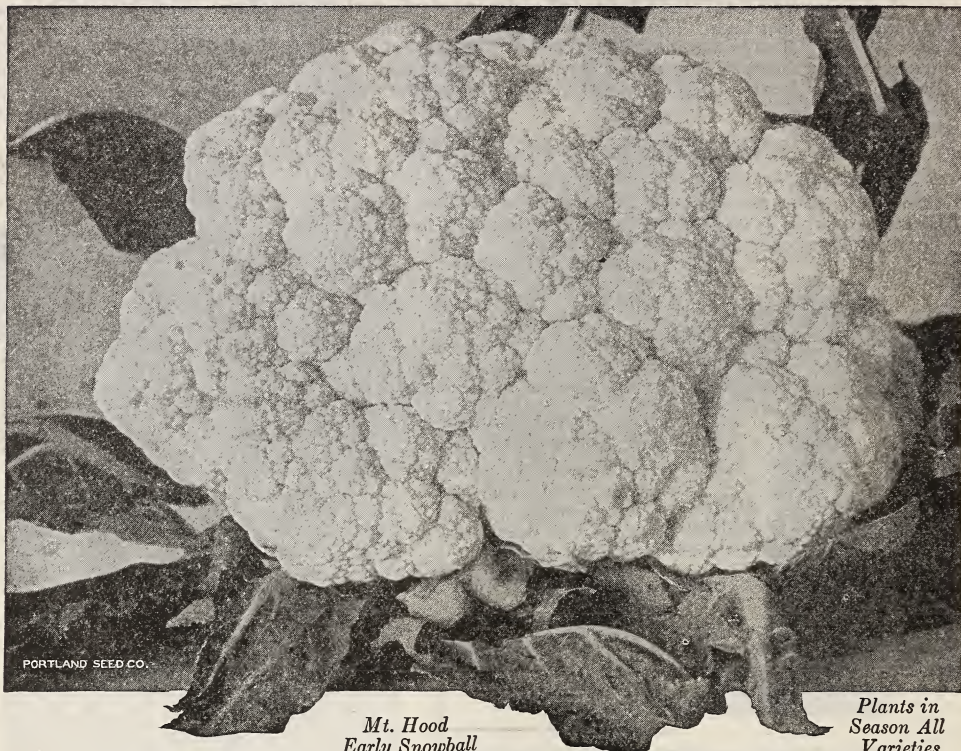
EARLY LARGE WHITE FRENCH

A valuable variety with large, white heads, firm and of good flavor.

Pkt. 10c, oz. 90c, $\frac{1}{4}$ lb. \$3.00, 1 lb. \$9.00



CAULIFLOWER



*Mt. Hood
Early Snowball*

*Plants in
Season All
Varieties*

CULTURE—The Cauliflower succeeds well in any soil where cabbage will grow but best results are obtained in rich loam with an abundance of water. By sowing early varieties in a hot bed in February or March, or later in a cold frame, fine heads can be obtained quite early. For a later supply, sow seed in a prepared bed in May, choosing a cool, moist place. When large enough transplant, making the rows about 2½ feet apart and 18 inches between the plants. In dry seasons the crop must be watered.



P. S. CO.'S "MT. HOOD" SNOWBALL

The seed that produces those handsome large white solid heads that bring big profits to the gardener. We offer our "Mt. Hood" Cauliflower seed under our own label, it having been carefully selected and grown for us by one of the very few expert Cauliflower growers, and is the best strain of "Early Snowball" obtainable. We especially recommend "Mt. Hood" Snowball for either early or late planting.

Pkt. 25c, ¼ oz. \$1.25, oz. \$4.00, ¼ lb. \$12.50



EARLY SNOWBALL

Ordinary strain. This is the regular grade of "Early Snowball" that is generally offered, and while it will not give as good results as "Mt. Hood," can be depended upon to produce a good crop. Pkt. 15c, ¼ oz. 75c, oz. \$2.50, ¼ lb. \$7.50

AUTUMN GIANT

The heads are white, large, compact and thoroughly protected by foliage.

Pkt. 10c, ¼ oz. 35c, oz. \$1.25, ¼ lb. \$4.25

DANISH GIANT—DRY WEATHER CAULIFLOWER

"Danish Giant" is an early, large, solid white Cauliflower that can successfully withstand a drouth that would prove fatal to other varieties and will thrive splendidly in dry sections, being peculiarly adapted to their growing conditions, but like all cauliflower must have rich soil and cultivation to give best results. "Danish Giant" can also be grown under moist conditions and is a dependable market variety. If your location is subject to drouth or you are "dry farming," be sure to plant "Danish Giant."

Pkt. 25c, ¼ oz. \$1.00, oz. \$3.50, ¼ lb. \$12.00

LARGE ALGIERS

A valuable late sort, sure to head, of the best quality and very popular with market gardeners everywhere. Plants large, but of upright growth the leaves protecting the heads so that they will endure, uninjured, a frost that would ruin other sorts. One of the very best of the late varieties.

Pkt. 10c, ¼ oz. 40c, oz. \$1.35, ¼ lb. \$4.50

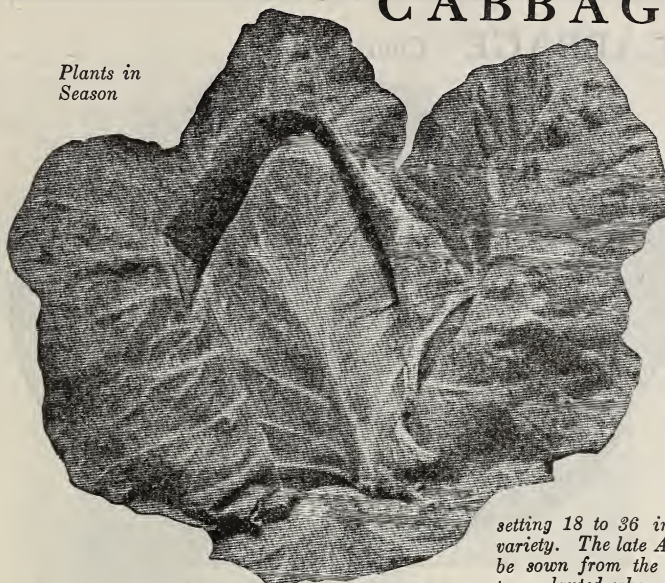
Don't Buy

cheap strains of Cauliflower Seed. Only the best select strains can be depended upon to produce a big percentage of large, white, solid heads



CABBAGE

Plants in
Season



It is important that the plants should not be crowded in the seed bed, or they will run up weak and slender and produce many long stems.

EARLY JERSEY WAKEFIELD

The favorite Early Cabbage with our market gardeners. A sure header. The thick, stout leaves and compact habit make it the best for Wintering over and very early setting.

Grown more extensively for market than any other early cabbage. Is always of good size, very solid, and has but few outside leaves; a reliable header and always gives good satisfaction

Pkt. 10c, oz. 35c, $\frac{1}{4}$ lb. \$1.20, lb. \$3.50

EARLY DWARF FLAT DUTCH

Grows low on the stem; a sure header; firm fine grained, tender and excellent.

Pkt. 10c, oz. 35c,
 $\frac{1}{4}$ lb. \$1.20, lb.
\$3.50.

SUCCESSION

Heads large, slightly flattened; grows low on the stem.

Pkt. 10c, oz. 40c, $\frac{1}{4}$
lb. \$1.35, lb. \$4.00

Fertilize

your Cabbage with

Diamond

Onion Fertilizer

1000 lbs. per acre

Promotes a quick, even growth, developing crisp, solid heads that command highest prices. Ask for our Booklet "FERTILIZERS."

CULTURE—The requisites for complete success are: First—Good seed. There is no other vegetable where the seed has so much influence on the quality of the product, and gardeners should always use the best procurable. Second—Rich, well prepared ground. Third—Frequent and thorough cultivation. A heavy, moist and rich loam is most suitable, which should be highly manured and worked deeply. Cabbage is universally grown and specific directions regarding the time and method of planting applicable to all localities cannot be given. In general, the early sorts should be sown very early in hot beds, hardened off by gradually exposing to outside air, and as early as the ground is in good condition, transplanted,

setting 18 to 36 inches apart, according to size of variety. The late Autumn and Winter varieties may be sown from the middle to the last of Spring and transplanted when 4 to 6 inches high. Shade and water the late sowings in dry weather to get them up.



COPENHAGEN MARKET

A Splendid Cabbage for Home Gardens

A splendid early globe-shaped Cabbage slightly flattened. The large solid heads are very uniform, with few outer leaves, keeps well and stands handling. Copenhagen Market originated in Denmark, where it is the favorite market variety, and we recommend it to our customers as the best early round head.

Pkt. 10c, oz. 40c, $\frac{1}{4}$ lb. \$1.35, lb. \$4.00



Copenhagen

CABBAGE—Continued

Cabbage Plants

Well grown
stocky plants
properly
hardened off—
all standard
sorts in season

Prompt
deliveries at
right prices

See Plant
Department



DANISH BALLHEAD

P. S. Co.'s Select Short Stemmed Ball Head

Select Short-Stem

Our strain of short-stem Ballhead is imported direct from Denmark, originating on the famous island of Amager, the vegetable garden of Copenhagen.

The fine ribbed leaves are so densely packed together that no space is left for water or air to start decay and the firm solid heads are famed for their superior excellence and keeping qualities. Matures late and when cut shows a fine, hard, snowy white, solid head. The best in its class. Pkt. 10c, oz. 40c, $\frac{1}{4}$ lb. \$1.35, lb. \$4.00

DANISH ROUND HEAD

Select Short-Stem

A round ball shaped cabbage of great solidity. Color, rich dark green, has few outer leaves, is very hardy and a profitable late market variety. Our stock of Round Head is Danish grown and of the same superior quality as the short-stem Ballhead, being one of the latest keepers and best varieties for early Spring market. Pkt. 10c, oz. 40c, $\frac{1}{4}$ lb. \$1.35, lb. \$4.00

RED CABBAGE—Odense Market

Used for pickling. The heads are very fine and remarkably sure heading. We believe this to be the best red cabbage.

Pkt. 10c, oz. 40c, $\frac{1}{4}$ lb. \$1.25, lb. \$4.00

SAVOY CABBAGE

Vertus—Late Savoy

Large, compact heads; crisp and tender with a rich flavor. Desirable for cooking or salads.

Pkt. 10c, oz. 40c, $\frac{1}{4}$ lb. \$1.25, lb. \$4.00

CHINESE IMPROVED OR PE-TSAI

The strain we offer resembles when well grown Cos Lettuce rather than Cabbage. It is often called Celery Cabbage on the market.

The leaves when young are crimped, of light green color and appear like smooth leaved mustard but with much broader and heavier midribs. The plant as it matures becomes more upright and forms heads much like Cos Lettuce. The inner leaves blanch an attractive light yellow or creamy white with very white midribs. It is of distinctive flavor, very mild and pleasant. It is served as a salad like lettuce or cooked like asparagus.

Sow in this latitude after July 1st at the same time as turnips. Early plantings of Pe-Tsai run quickly to seed in hot weather. Sow in drills fourteen to twenty inches apart and thin two or three times; or if grown for the market start in boxes and transplant like late cabbage.

Pkt. 10c, oz. 40c; $\frac{1}{4}$ lb. \$1.25; lb. \$4.00



Late Flat Dutch

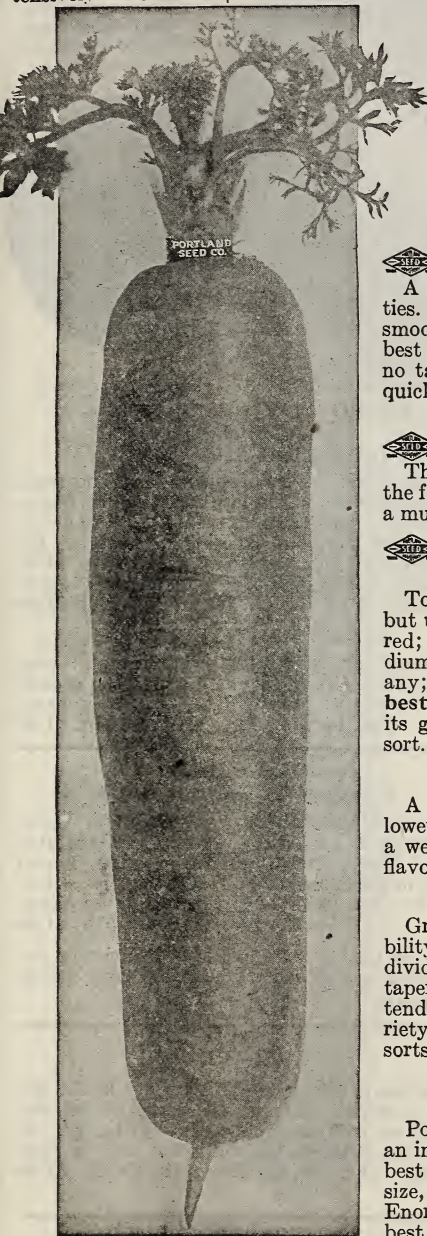
PREMIUM LATE FLAT DUTCH

This improved strain possesses all the good qualities of the old favorite, "Late Flat Dutch," one of the largest of the late varieties and is a sure header. Pkt. 10c, oz. 35c, $\frac{1}{4}$ lb. \$1.20, lb. \$3.50.



CARROTS

CARROTS, aside from being one of our most useful and easily grown garden vegetables, are invaluable for stock feeding. They are greatly relished, promote health and put a sleek coat on cattle and horses, giving a well-kept appearance. Dairy and stockmen should grow them extensively. For their special use we recommend our "Yellow Giant."



CULTURE—A sandy loam is the best soil for the carrot, but any good land, if thoroughly and deeply worked, will produce satisfactory crops. Sow as early in the Spring as the ground is fit to work, though good crops may be grown from sowing as late as June 15. For table use, sow the smaller kinds in rows 16 to 18 inches apart, and for field culture prepare the ground thoroughly and sow in drills 18 to 24 inches apart. Cover one-half to one inch deep and see to it that the soil is well firmed above the seed.



P. S. CO'S NEW CORELESS

A splendid new carrot. Larger than other early varieties. Crisp, solid, of fine flavor and almost coreless, grows smooth and uniform, a true stump rooted type. The very best for canning or drying as it is nearly coreless and has no tap root to trim off and waste. Holds its color and cooks quickly. The ideal carrot for home gardens.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 60c, lb. \$1.75



EARLY SCARLET HORN

The best early kind for general use. It is larger than the forcing variety, but fully as good in quality, and produces a much larger crop.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50



CHANTENAY

The Market Gardener's Favorite

Tops, medium sized; necks, small; roots, tapering slightly but uniformly stump-rooted and smooth; color, deep orange red; flesh, very crisp and tender. Although this is a medium early sort, it furnishes roots of usable size as early as any; is a heavy cropper, and is undoubtedly one of the best for both the market and private garden, while its great productiveness makes it very desirable as a field sort.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

OXHEART

A thick carrot, five or six inches long and very blunt at the lower extremity. It grows very rapidly and the root attains a weight of more than a pound. It is tender and of good flavor.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

DANVER'S HALF LONG

Grown largely on account of its productiveness and adaptability to all classes of soil. Tops, medium sized, coarsely divided. The smooth, handsome roots are of medium length, tapering uniformly to a blunt point; flesh, sweet, crisp, tender; deep orange in color. Although the roots of this variety are short, they produce as large bulk as the longer field sorts, and are more easily harvested.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

P. S. CO'S. IMPROVED LONG ORANGE

Popular for farm use on deep, mellow soil. Our stock is an improvement obtained by years of careful selection of the best formed and deepest colored roots, which grow to a large size, some specimens averaging twelve inches in length. Enormous crops can be grown under fair culture; one of the best varieties for feeding stock.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

P. S. Co.'s New Coreless

USE DIAMOND VEGETABLES FERTILIZER FOR CARROTS

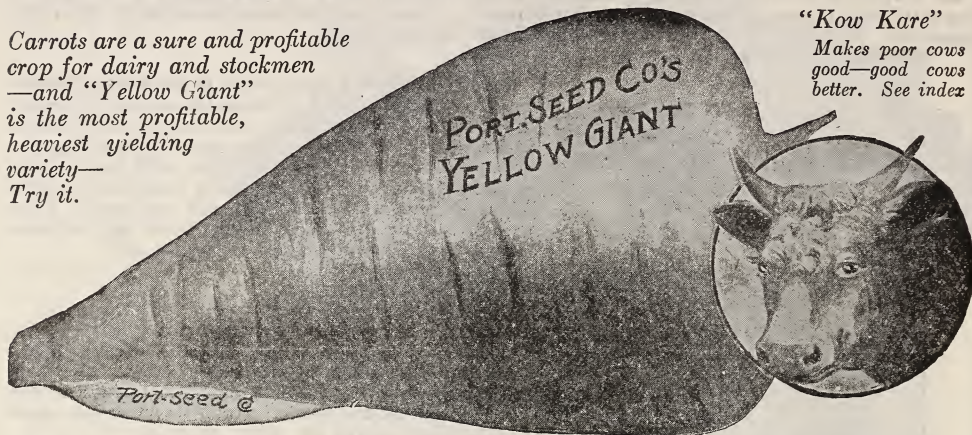
Our Book "FERTILIZERS" tells how to profitably use Fertilizer. Tells what you should get for your money when you buy Fertilizers—a book every grower should have and is **FREE FOR THE ASKING**

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS. PAGE TWO OF CATALOG

CARROTS—Continued

Good and Productive Stock Carrots

Carrots are a sure and profitable crop for dairy and stockmen—and "Yellow Giant" is the most profitable, heaviest yielding variety—Try it.



"Kow Kare"

Makes poor cows good—good cows better. See index

P. S. CO.'S YELLOW GIANT

Specially Adapted to Moist, Heavy Soils

This new Carrot originated at the Sydney, Australia, Experimental Station, and has proved itself to be the earliest and most productive stock carrot offered to date. It is a half long variety, with an immense broad shoulder. The Carrot penetrates less than one-half the depth into the ground, which saves about one-half the expense of harvesting the crop. The color is of bright yellow, and is perfection itself for giving the proper color to butter. Every dairyman who wants a big crop of carrots of the right quality and easy of culture should plant our Yellow Giant.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 40c, lb. \$1.00

IMPROVED SHORT WHITE— "MASTODON"

Of Excellent Table Quality

Ranks as a field carrot, owing to its enormous productiveness and the ease with which it can be harvested. Roots half long, smooth, very heavy at the shoulder, but tapering regularly at the point: color, light green at the crown, white below: flesh, rich, white, solid, crisp and of excellent flavor. Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 40c, lb. \$1.00

LARGE WHITE BELGIAN

Extensively grown for stock feeding: very productive. Grows so much above the ground that the entire crop can be pulled by hand.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 40c, lb. \$1.00

CRESS

Curled, or Pepper Grass

This salad is much used with lettuce, to which its warm, pungent taste makes an agreeable addition. The seed should be sown in drills about 16 inches apart, on very rich ground, and the plants well cultivated. It may be planted very early.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

CHIVES—Chives belong to the onion family and the tops are used green for flavoring and garnishing. They grow in little clumps and can be supplied as plants any time in the early spring.

See Plant Department

CORN SALAD

Fetticus, or Lamb's Lettuce

A refreshing salad, used extensively in Winter and Spring as a substitute for lettuce. It is often cooked like spinach. Sown in drills 1 foot apart, in the Spring or Fall. On the approach of cold weather cover over with straw or coarse litter.

Pkt. 10c, oz. 30c, $\frac{1}{4}$ lb. \$1.00

CHICORY

The roots, dug in the fall, dried, cut in thin slices, and ground, are used largely as a substitute for coffee. Seed should be sown quite thinly in shallow drills early in the spring. When well started, thin out to stand 2 or 3 inches apart in the row. Pkt. 10c, oz. 40c, $\frac{1}{4}$ lb. \$1.35, lb. \$4.00.

COLLARDS

Southern Georgia—This variety is the old-time favorite. Stands all sorts of adverse conditions without injury. Is very hardy. In many places where the soil is too poor to grow cabbage. Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 65c, lb. \$2.00

CHERVIL

Can be planted any time in the early spring. The leaves should be kept cut, and if not allowed to run to seed, will keep green for a long time. Makes an excellent plant for garnishing.

Curled. Very finely curled, somewhat resembling parsley and used in same manner.

Pkt. 10c, oz. 25c, $\frac{1}{4}$ lb. 80c, lb. \$2.50



CELERY

CULTURE—*Sow the seeds early, about February, in a hot-bed or cold frame. When 3 inches high transplant, setting them 4 inches apart. When grown 6 inches, and fine, stocky plants, set in richly manured, deep soil, in rows 3½ feet apart and about 9 inches from plant to plant. Water if dry weather follows transplanting. During the next two months all the attention that is required is to keep down the weeds. Blanch by placing boards along the rows, or earth up a little, and continue doing so at intervals until only the tops of the leaves are visible late in Autumn. Never hoe up the earth when plants are wet. One ounce of seed produces about 6,000 plants. See footnote on growing.*



WHITE PLUME

The Leading White Celery

A handsome, crisp sort, of very easy cultivation. Naturally its stalks and portions of its inner leaves and heart are white. It is the earliest celery known.

Pkt 10c, oz 35c, ¼ lb \$1.20, 1b \$3.50

GOLDEN YELLOW SELF-BLANCHING

This is no doubt the best celery for early Spring market use. Plants are of a yellowish green color when young, but as they mature the inner stems and leaves turn a beautiful golden yellow, which adds much to their attractiveness and makes the work of blanching much easier.

Pkt 10c, oz 80c, ¼ lb \$2.65, 1b \$8.00

EASY BLANCHING CELERY

As an early green top variety that has become very popular in eastern celery growing sections because it requires only a few days to blanch the celery for market. The advantage of this is apparent.

Pkt 10c, oz 40c, ¼ lb \$1.35, 1b \$4.00

WINTER QUEEN

This is without doubt the most valuable variety of celery for Winter and Spring use ever introduced. Has double the amount of heart of any known celery. The plant has a fine appearance, of compact growth, and blanches to a beautiful cream-white. Ribs perfectly solid, crisp and a delicious nutty flavor.

Stored for Winter or Spring use, it is an excellent keeper and when taken out the blanched stalks will be firm and crisp; entirely free from strings; brittle and of sweet flavor.

Pkt 10c, oz 30c, ¼ lb \$1.00, 1b \$3.00

GIANT PASCAL

Largest variety grown: of fine, nutty flavor; very easily blanched.

Pkt 10c, oz 35c, ¼ lb \$1.20, 1b \$3.50

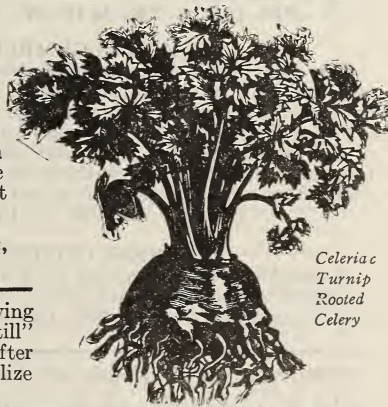
CELERY SEED For flavoring. Oz 10c, ¼ lb 20c, 1b 65c

CELERICAC

Turnip Rooted
Celery
Large Smooth
Prague

Improved form with very few side roots. The largest and best variety.

Pkt 10c, oz 35c,
¼ lb \$1.20



*Celeriac
Turnip
Rooted
Celery*



*White
Plume*

Celery Plants

Large
Healthy
Transplanted
Plants in
Standard
Varieties for
Delivery in
Season

Any Number
at
Right Prices

See Plant
Department

"Celery Culture"

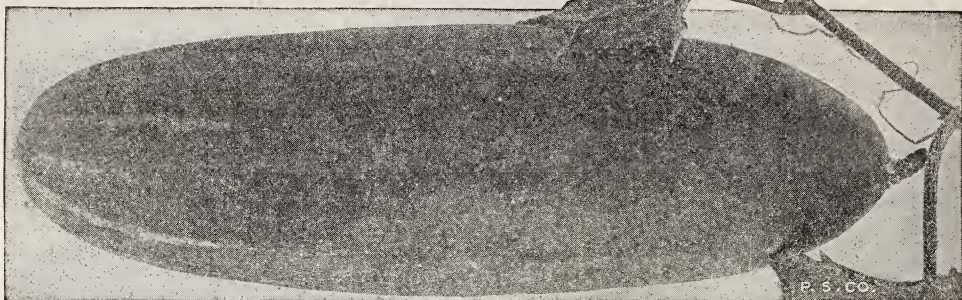
By Beattie

\$1.10 a copy

To Succeed with Celery you must keep your plants growing constantly while young, if you allow them to "stand still" they will run up to seed later. Always cultivate as soon after watering as the ground is dry enough to work well. Fertilize heavily in the Spring—and use nitrate later if needed.

CUCUMBERS

For Cucumbers
DIAMOND FERTILIZER
 will repay its cost many
 times over. Let us send
 you our Free Book
 "FERTILIZERS"



Diamond Long Green

CULTURE—Cucumbers need a warm, rich soil, and should not be planted in open ground until the weather is settled, as otherwise they will not thrive. Plant in hills 4 feet apart each way, thinning to three or four of the strongest plants, after danger from insects is passed. As fast as the cucumbers attain suitable size they should be taken from the vine, whether required for use or not, as their ripening soon destroys the vines' usefulness.

"DIAMOND" LONG GREEN

The leading large variety. Fruit from 10 to 12 inches long, dark green, crisp and tender. A good variety for slicing, and when matured they are the best for sweet pickles. We offer our "Diamond Strain"—they will grow long and uniform in shape. Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 65c, lb. \$2.00

PEERLESS, OR EARLY WHITE SPINE

One of the best sorts for table use, fruiting early and abundantly. Fruit uniformly straight and handsome: light green, with a few white spines. Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

SHORT GREEN, OR EARLY FRAME

An excellent sort for both table use and pickling. Fruit straight, small at each end, bright green, with crisp, tender flesh. Comes into use a little later than the Early Cluster and keeps green a long time.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

LEMON CUCUMBER

This dainty little cucumber resembles a lemon both in form and color, having a distinctive flavor superior to and not found in any other cucumber. The Lemon Cucumber is so prolific that a single vine will be ample for the needs of the average family. It is also said that the Lemon Cucumber can be eaten without fear of the harmful results that some experience from eating cucumbers.

Pkt. 10c, oz. 30c, $\frac{1}{4}$ lb. \$1.00, lb. \$3.00

JAPANESE CLIMBING

A useful variety for growing on a trellis or wire. The cucumbers are long, of a dark green color, white flesh, crisp, and of a good flavor.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c

BOSTON PICKLING OR GREEN PROLIFIC

Color, bright green, and a great producer. The fruits average 4 to 5 inches in length when large enough for slicing, and are of excellent quality but it is for producing medium sized pickles that this variety is so highly esteemed.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

TELEGRAPH—FORCING

A standard forcing variety, very popular with gardeners. Fruit 14 to 16 inches long, of very fine quality. A sure and heavy cropper.

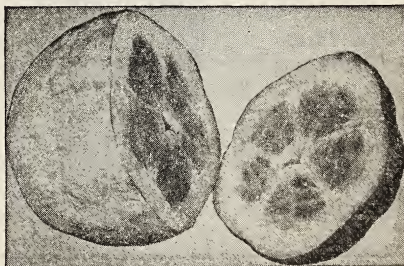
Pkt. 25c

"THE DAVIS PERFECT" CUCUMBER

The "Davis Perfect" is of perfect form, large size and of the finest color; is crisp, delicious and almost seedless. This fine variety comes from the originator of the Davis Wax Bean and is one of the most valuable varieties for home or market.

The "Davis Perfect" is as handsome, grown outside, as any hothouse cucumber.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 65c, lb. \$2.00



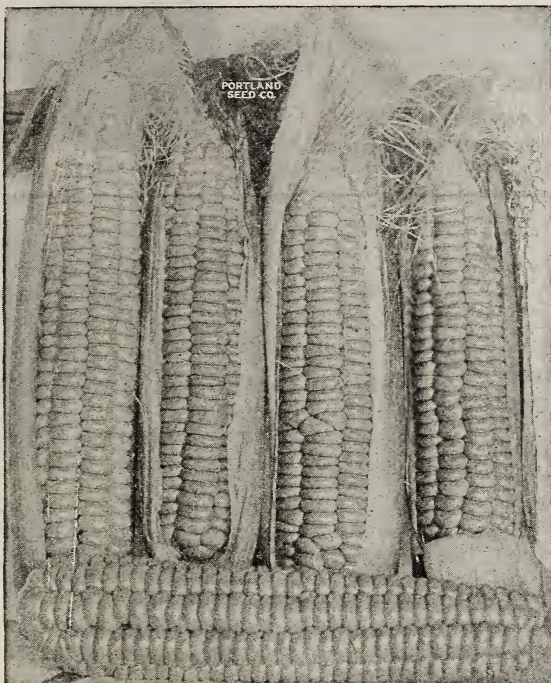
Lemon Cucumber

"CORONA DRY" Powdered Arsenate of Lead will protect Cucumbers and other vegetables from leaf-eating insects. Ask for a free copy of "Garden Pests and Their Control"

SWEET OR SUGAR CORN



Prices Sweet Corn, Postpaid, Pkt. 15c, ½ lb. 20c, 1 lb. 35c, 10 lbs. \$3.00



Golden West

EARLY WHITE CORY—Mammoth

The stalks are no larger than those of the "White Cob Cory," but each stalk furnishes two or more large, fine-shaped ears, which are fit for use before those of most other sorts. The ears are 12-rowed, very symmetrical and handsome. The grain is large, broad, very white and of remarkably good quality.

EARLY MINNESOTA

This old and deservedly popular variety is one of the best early sorts for the market and the private garden.

COUNTRY GENTLEMAN

The sugary sweetness and delicious flavor make this old-time favorite one of the most desirable varieties. The slender white irregular kernels are very long, the cob small, making much more to the ear than other varieties.

STOWELL'S EVERGREEN

Remarkable for remaining a long time in a fresh condition suitable for the table. Hardy and productive and the best late variety for general use.

GOLDEN BANTAM

The original yellow sweet corn. Does not grow quite as large an ear as our "Golden West," but has most of its good qualities; early, productive, sweet and rich.

CULTURE—Corn should not be planted until the ground is warm, as the seed will rot in cold, damp soil, or if planted too deep. Late April is early enough for first plantings and for succession plant every two weeks through May and June. Cover the first planting very lightly, increasing the depth a little for the later plantings. For the Dwarf Early varieties, rows should be three feet apart; for later large varieties, four feet and the hills two or three feet in the rows.

Sweet or Sugar varieties are used both for table and stock feeding, some of the large later sorts being preferred for silos and fodder.



GOLDEN WEST

The richest, sweetest corn ever grown—To be sure of the right strain, look for our Diamond trade mark on every package.

Our "Golden West" Corn, a selection from the original strain of Golden Bantam, produces a larger ear, has a more vigorous growth, and by continued careful selection, improves yearly. We believe it to be the richest, sweetest, best yielding early sweet corn. "Golden West" is extremely hardy, can be planted earlier than other varieties, and, being of dwarf habit, can be planted closer than other sorts. It is the very best corn for market or home gardens, where earliness and quality are considered. The color is a rich, creamy yellow, deepening to golden as it matures, and the quality is so fine that you must try it to appreciate how good corn can be.

BLACK MEXICAN

An old favorite still in good demand on account of its quality and sweetness. A good variety for home gardens.

PORTLAND MARKET

One of the earliest large eared varieties. Large, sweet, plump grains of purest white on well filled ears; a good market variety. Ears large but stalk not considered a rank grower.

OREGON EVERGREEN

We offer "Oregon Evergreen" as the finest main crop Sweet Corn. The flavor and sweetness have not been excelled and the extreme whiteness of the large ears makes it very beautiful and valuable for canning. It is large and the stalks produce more ears than any other variety and have a very heavy husk over the grains, protecting them from insects and keeping the ear fresh a long time after cutting.

"Oregon Evergreen" is a hardy, vigorous grower and is the ideal Corn for market gardeners.

EGG PLANT

Should be started in a hotbed and transplanted when the weather is settled and the ground thoroughly warm. They will thrive with the same treatment as that given the tomato.



BLACK BEAUTY

An extra early, quick-growing, vigorous variety: handsome and very uniform. Color, deep blackish purple. Splendid market sort.

Pkt. 10c, oz. 75c, $\frac{1}{4}$ lb. \$2.50

NEW YORK IMPROVED, LARGE PURPLE

The leading market variety. Large, round, dark, excellent and the most productive.

Pkt. 10c, oz. 75c, $\frac{1}{4}$ lb. \$2.50



Black Beauty

GARLIC

CULTURE—Garlic is a profitable crop if your soil is right and proper methods of culture are employed. The sets are planted in the same manner as "Multiplier Onions," dividing the little clump, planting each bulblet thick end down, being careful not to bruise them as they will rot if injured. October is the planting month in Western Oregon.

A medium loam soil containing a little sand and well drained is best and commercial fertilizer should be used. Deep and thorough preparation of the soil is necessary.

Plant in rows 14 inches apart—sets 4 inches apart in the row. It requires 175 to 200 pounds to plant an acre. When approaching maturity, the tops die down and are not removed but used to braid the Garlic together for hanging up and convenience in handling. An acre should produce from two to four tons.

Write for Prices

ENDIVE

This is a hardy vegetable, cultivated principally for a Winter salad. Sow from May until August for a succession of crops: tie the leaves closely together to blanch them.

BROAD LEAVED BATAVIAN (Escarolle)

Has broad, thick leaves, which form a large loose head.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 65c

WHITE CURLED

A beautiful variety, with curled, mossy leaves for early use.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 65c

GREEN CURLED

Standard sort for Fall and Winter.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 65c

HORSERADISH ROOTS

For prices and description, see Plant Department

KOHL RABI

Hardy and of easy culture. Grown from plants the same as cabbage. The Kohl Rabi is a vegetable intermediate between the cabbage and turnip and combines the flavor of both. The edible part is a turnip-shaped bulb formed by the swelling of the stem. Kohl Rabi is far superior to cabbage or turnips in the delicacy of its flavor and is a splendid addition to every garden. It should be eaten before growth ceases.

EARLY WHITE VIENNA

Very early; bulb white; best table variety.

Pkt. 10c, oz. 30c, $\frac{1}{4}$ lb. \$1.00

EARLY PURPLE VIENNA

Same as above except in color, which is purple.

Pkt. 10c, oz. 30c, $\frac{1}{4}$ lb. \$1.00



"CORONA DRY"—THE UNIVERSAL INSECTICIDE—FOR GARDENS

A safe, inexpensive, easily applied and efficient remedy for chewing garden pests—for use on fruit trees, berry bushes and plants that will insure perfect fruit and clean vegetables. "GARDEN PESTS AND THEIR CONTROL" tells how to use "Corona Dry" profitably in your garden. Free copy on request.

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG



HERB SEEDS—Sweet, Pot and Medicinal

Every garden should contain a collection of Herbs for flavoring and medicinal purposes. *They are almost a household necessity: are easily grown, and many of them are very ornamental.

CULTURE—Herbs in general delight in rich, mellow soil. Those marked with a (*) are perennial and when once obtained in the garden may, with a little attention, be preserved for years. Sow the seeds early in the Spring in shallow drills, one foot apart. We offer some of the most useful and popular. They should be cut on a dry day, just before they come into full bloom, and tied in bunches and hung up or spread thinly on a floor where they can dry quickly. When dry and crisp, rub fine and bottle.

All the following Herbs, 10c per Packet.

Anise—Seeds have useful medicinal properties; also used for flavoring.

***Balm**—Used for culinary purposes and for making Balm Tea.

Basil—Used for seasoning soups, having a decided flavor of cloves.

Borage—Excellent for bees, flowers are also in request for garnishing.

Coriander—Seeds used in confections; leaves for soups and salads. Very aromatic.

Caraway—For flavoring, the seeds being used especially by bakers and confectioners.

***Catnip**—(Cat Mint)

Dill—The flower heads and seed are used in soups, stews and pickles: leaves have same flavor and can be used in like manner.

***Fennel**—For garnishing and fish sauce.

Hysop—Used medicinally.

***Horehound**—Used medicinally as a cure for colds.

***Lavender**—By distillation produces the well-known Lavender water, the flowers for perfuming wardrobes, etc.

Marjoram—The sweet aromatic leaves in either a green or dry state are used for flavoring.

***Pennyroyal**—Used medicinally.

***Rosemary**—Infusions of the leaves are used in medicinal beverages. Produces an aromatic oil.

***Rue**—Leaves are used in medicine, also for roup in poultry.

***Sage**—The leaves and tender tops are used in stuffings and sauce: also in the beverage known as Sage Tea.

Saffron—Used for flavoring.

Savory—Summer. Used for flavoring.

Savory—Winter.

Thyme—Broadleaved, used in soup, stuffing and sauce.

***Wormwood**—Taken as a tonic in the form of tea.

Tansy—Used medicinally, as tea and bitters.

Herb Seeds for Flavoring

Anise—Anise seed for flavoring.

¼ lb. 15c, lb. 40c

Poppy—Seed used for flavoring.

¼ lb. 10c, lb. 35c

Mustard—For flavoring and pickling

Lb. 10c, postpaid 20c; 100 lbs. market price

Celery—For flavoring.

Oz. 10c, ¼ lb. 15c, lb. 50c

Caraway—We keep constantly on hand a large stock of well preserved seed for the use of Druggists, Bakers and Confectioners.

Oz. 10c, ¼ lb. 20c, lb. 55c

Dill—Used to flavor soups, stews and pickles. Leaves possess similar qualities, and can be used in same manner as seeds. **Market Price.**

Foreign Names of Herbs

A Stands for Annuals or those generally used for such. B for Biennials. P for Perennials.

	ENGLISH	FRENCH	GERMAN	ITALIAN
A	Anise	Anis	Anis	Anacio
P	Balm	Melisse-Citronelle	Citronen-Melisse	Melissa
A	Basil	Basilic-grand	Basilikum	Basilice
A	Borage	Bourrache	Boretsch	Boragine
A	Caraway	Cumin des pres	Feld-kummel	Carvi
	Catnip	Cataire	Katzenmunze	Cataria
	Coriander	Corian re	Koriander	Coriandorio
A-B	Dill	Aneth	Dill	Aneto
P	Fennel, Sweet	Fenouil	Fenchel	Finocchio
P	Fenugreek	Fenugrec	Bockshornsaamen	Foenungrasciene
P	Horehound	Marrube Blanc	Andorn Kraut	Marrubio
P	Hysop	Hysoppe	Isop	Issopo
P	Lavender	Lavende	Lavendel	Lavanda
A-B-P	Marjoram, Sweet	Marijolaine	Majoran	Maggiorana
P	Mint, Common	Menthe des Jardins	Munze	Menta
P	Rosemary	Romarin	Rosmarin	Rosmarino
A	Rue	Rue	Raute	Ruda
P	Sage	Sauge	Salbei	Salvia
A	Saffron	Safran	Safran	Zafferano
P	Sorrel	Oseille	Sauerampfer	Acetosa
A	Savory, Summer	Sarriette	Bohnenkraut	Santoregia
P	Tansy	Tanaisie	Gemeiner Rainforn	Atanasia
P	Thyme	Thym	Thimian	Timo
P	Wormwood	Absinthe	Wermuth	Assenzio

WE SUPPLY HERB PLANTS IN MOST VARIETIES IN SEASON. SEE PLANT DEPT.

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG

KALE

EMERALD ISLE—Finest in the World

This is really the handsomest Kale that has ever come under our notice: and is entirely distinct from other strains, very hardy, of medium height, and very vigorous, throwing out new shoots as fast as the leaves are used, and will furnish excellent greens all winter. The closely curled, handsome leaves are most attractive and of fine flavor. Fine exhibition plant. Pkt. 10c, oz. 25c, $\frac{1}{4}$ lb. 65c


TALL GREEN CURLED SCOTCH

Grows about two feet high: leaves dark green, curled and wrinkled: very hardy and is improved by a slight frost.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 65c

DWARF GREEN CURLED

Leaves beautifully curled and bright green. Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 65c

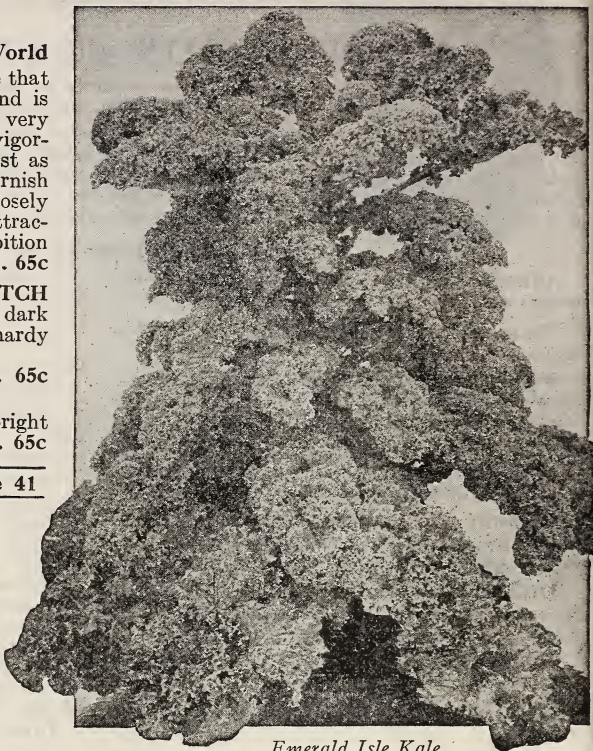
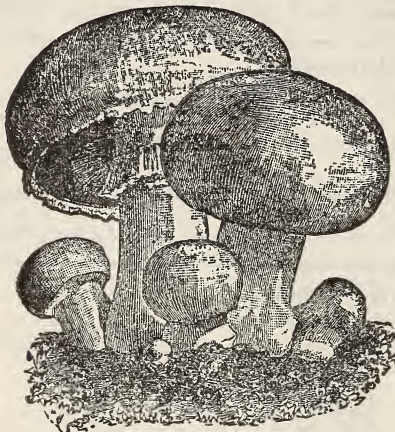
 For KOW-KALE See Page 41

LEEK

The Leek belongs to the Onion family. Prized for soups. Cultivate same as Onions, but should be billed up about the neck to blanch it.

LARGE ROUEN or American Flag. A large, favorite American sort.

Pkt. 10c, oz. 35c, $\frac{1}{4}$ lb. \$1.15



Emerald Isle Kale


MUSHROOM SPAWN

With intelligent care and good spawn, Mushrooms can be made to pay handsomely. They can be successfully grown in a dry cellar, under the benches of a greenhouse, or in sheds, where the temperature can be kept from 50 degrees to 60 degrees through the Winter. Our free pamphlet gives general instruction.

NEW AMERICAN SPORE CULTURES

This Spawn is produced from the original spores by the new French process—exclusively controlled by the American Spawn Co., and is the only method by which select varieties can be perpetuated and improved. Bricks weigh about 20 ounces and will plant 10 square feet.

Price per brick, postpaid 40c, prepaid 5 bricks \$1.75

 **MUSHROOMS:** Growing. By Duggar. 244 pages. Postpaid \$2.10
MUSHROOM CULTURE and Pure Culture Spawn. 32 pages. Postpaid... .35

MUSTARD

The varieties we offer make the finest of greens when used alone or if combined with cress furnishes a delicious salad. Sow any time in the Spring, in rows, and thin out as necessary.

FORDHOOK CURLED — Beautiful dark green, finely curled plume-like leaves that are of distinctive flavor: superior to spinach as greens and is fine for salads. "Fordhook Curled" is vigorous and productive.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

SOUTHERN GIANT CURLED—We offer a fine strain of the true curled leaf.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

CHINESE MUSTARD—Less pungent than other varieties. Chinese Mustard is most delicious, thriving at the same season and under conditions that are favorable to spinach.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

LETTUCE

*Lettuce
Plants
for Gardeners
in Season*



P. S. Co.'s
"Crispette"
a splendid lettuce
at all seasons for
Home Gardens

CULTURE—Lettuce is so extensively grown that cultural directions seem unnecessary, but we offer a few simple suggestions that may save a later disappointment, as any failure is generally blamed to the seed. This should not be, as Lettuce, like many other vegetables, requires very rich soil, plenty of water, a cool growing season and intense culture to produce the best results. If the earliest varieties are planted out in the Spring, and the weather turns dry and hot, they will run up to seed without heading. The same seed sown in the Fall or with cooler growing weather would develop perfectly. At a temperature of 40 degrees or lower Lettuce will not thrive. At 65 degrees and upward it has a tendency to run up and not head properly. For outside planting sow the seed in shallow drills from one to two ounces to the 100 yards. An ounce will produce 3,000 plants. Four pounds should plant an acre. Lettuce matures in forty to sixty days from time of planting.

P. S. CO.'S CRISPETTE

Our "New Crispette" is a beautiful lettuce, the quality of which is simply perfect. The large, curly leaves, which cover the outside of the solid heads, are of a bright, light green. The unusual solidity of the heads is insured by the large, white main ribs of the leaves, each of which curving strongly toward the center, makes it impossible for the leaves to open outward and expose the center, which will always be found crisp, tender, sweet and melting. It matters not whether grown to head in the early Spring or the hottest days of Summer, the leaves are always crisp and tender.

Pkt. 10c, oz. 25c, $\frac{1}{4}$ lb. 85c, lb. \$2.50

MAY KING

A large growing, smooth leaved, richly flavored sort. Plant, light green, with round leaves, which form into a very solid, compact, round head; stands a long time without running to seed. Inner leaves blanch to a rich golden yellow. Exceedingly rich, tender and buttery. Fine for open ground or forcing. For succession plant in Spring, then August and again in September.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 60c, lb. \$1.75



SIMPSON'S EARLY CURLED

A leading market variety used for very early planting and forcing. Forms a dense mass of finely curled and wrinkled leaves that are excellent and tender, and do not wilt readily.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

BLACK SEEDED SIMPSON

Forms a close, compact mass of curly leaves of a yellowish green. Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

DIAMOND FERTILIZERS WILL FORCE LETTUCE EARLY—Make Big Solid Heads—Tell us whether you are growing under glass or outside and we can tell you what fertilizer is best, and how to use it profitably—Fertilizer Book Free—Ask for it

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG



LETTUCE—Continued



NEW YORK OR WONDERFUL

The Best Head Lettuce for Market Growers

This is the mammoth head lettuce so largely grown for shipment to distant markets, arriving in splendid condition. The immense heads are solid, heavy, beautifully blanching to a creamy white with bright green outer leaves. The quality is unsurpassed, being tender, crisp and sweet. "New York" is a hardy, rapid grower, deep rooted and resistant to drought; a slow seeder and sure to head. Plants should be thinned to 12 to 14 inches. **Pkt. 10c, oz. 40c, ¼ lb. \$1.25, lb. \$4.00**

CHICKEN

A rough, tall lettuce grown for chicken feed only. Grows 4 feet tall and supplies lots of feed. Forms no head.

Pkt. 10c, oz. 20c, ¼ lb. 50c, lb. \$1.50.

HANSON

Improved Hard Heading Stock

One of the very best. Heads green outside and white inside; grow to a remarkable size, very solid, and is deliciously sweet, crisp and tender. It withstands the hot sun well.

Pkt. 10c, oz. 20c, ¼ lb. 50c, lb. \$1.50

GRAND RAPIDS

For Early Forcing

As a Lettuce for greenhouse forcing, this variety undoubtedly stands at the head of the list. Of quick growth, and stands for some days after being fit to cut. The plant is upright, and forms a loose head or cluster of large, light yellowish green leaves, slightly crimped and blistered, rather thin, good flavor, crisp and tender. It will stand shipping better than most curled sorts.

Pkt. 10c, oz. 20c, ¼ lb. 65c, lb. \$2.00

WHITE PARIS CO.'S

Oval heads of upright growth; tender and crisp.

Pkt. 10c, oz. 20c, ¼ lb. 60c, lb. \$1.75.

BIG BOSTON

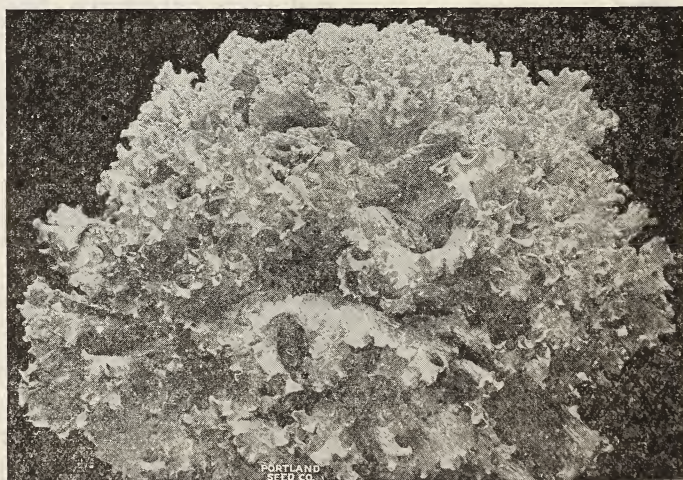
Very large, smooth-leaved, solid-heading variety, grown more extensively throughout the east and south than any other. It is congenial to all climates, and is a good shipper. In flavor it probably excels all other smooth-leaved varieties. An excellent all year 'round lettuce.

Pkt. 10c, oz. 25c, ¼ lb. 85c, lb. \$2.50.

BROWN DUTCH

Forms a large, solid head; sweet, tender and of good flavor. Outer leaves are tinged with brown. It is very hardy.

Pkt. 10c, oz. 20c, ¼ lb. 50c, lb. \$1.50



PORTLAND SEED CO.

Grand Rapids

**BURRELL GEM**

The Perfect Melon for Market or Home Gardens

"Burrell's Gem" has a tough, thin rind, well arched ribs, covered with a closely interlaced gray netting; shape elongated, being about $4\frac{1}{2}$ inches in diameter by 6 inches long, flesh of a reddish orange, very thick, fine grained and spicy, seed held firmly in a triangular cavity. This is the secret of a good shipping melon. If the seeds shake loose easily a melon will quickly decay.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

OSAGE, OR MILLER'S CREAM

One of the finest flavored melons in cultivation, and highly recommended. The flesh is of a rich salmon color, very sweet and melting in quality.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

MUSKMELONS

CULTURE—Plant in hills 4 to 6 feet apart each way, after danger of frost is past and ground is warm; enrich well with well-rotted manure and plant the seeds just under the surface, not too deep. One ounce to fifty hills, two or three pounds per acre.

Melons thrive best on warm, light soils, but good crops are obtained on heavy ground if it is rich and well drained; in cultivating, hill up by drawing the soil toward the plant. Use Bug Death, lime, slug shot or land plaster for destroying insects.

ROCKY FORD—POLLOCK 10-25

This is the latest improved popular Rocky Ford. It eliminates every defect of all other strains. Perfect in size, shape, netting, flavor, and long keeping and good shipping qualities. Our seed is from one of the most reliable growers in Colorado. Pkt. 10c, oz. 25c, $\frac{1}{4}$ lb. 75c, lb. \$2.00, postpaid.

HOODOO

Grows to a convenient size. Flesh thick and firm; deep salmon or orange color.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 60c, lb. \$2.00

ROCKY FORD OR NETTED GEM

The fruit is oval, slightly ribbed, densely covered with coarse netting. Flesh thick, green, very sweet and highly flavored. The fruit is wonderfully uniform in shape and quality. A favorite with market gardeners everywhere.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

SMALL GREEN NUTMEG

A variety ripening early. Flesh, green, fine and sweet. Superior for the early market, or family garden, and a favorite for hotels and restaurants. Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

LARGE YELLOW CANTALOUPE

Early and productive; flesh salmon color, rich, sweet. Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

WATERMELONS

CULTURE—Watermelons thrive best on light, well-drained soils, but give good results on any good rich garden soil that is properly drained and cultivated. Plant after the weather is settled and ground warm. Hills should be 8 feet apart each way and with well rotted manure thoroughly worked into each hill. One ounce of seed will plant thirty hills, two to three pounds per acre. Thin to two or three plants per hill.

TOM WATSON

This excellent new melon is of elongated form, averaging 18 to 24 inches in length, 10 to 12 inches in diameter, has a thin, dark green rind and deep red flesh; crisp and sugary, with a lusciousness and distinctive flavor that makes it one of the finest melons ever produced; is hardy, early and stands handling and long shipment.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

ICE CREAM, OR PEERLESS

A grand favorite and standard variety. Superior in every respect. Has beautiful crimson core, which is always fine grained; cannot be surpassed in flavor; very prolific.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

KLECKLEY'S SWEET, or MONTE CRISTO

A splendid sort for home use or near markets. Vine vigorous and productive; fruit of medium size; oval; color dark, mottled green in two shades, forming indistinct stripes. Flesh a beautiful bright rich red; exceedingly sweet and tender.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

"KING AND QUEEN" Winter Watermelon

Average weight, 25 pounds. Spherical in shape, ivory shell, pink center, seeds black. The most luscious, handsome and valuable winter melon in the world. It is very hardy, a good drought-register, and does well in any soil which grows melons; ripens every melon in less than 120 days, and does not change its condition for ninety days if not bruised. The shell is very hard and the melon ripens to within one-eighth of an inch of it.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

SWEET HEART

Good shipper. Vine vigorous and productive, ripening its fruit early. Fruit large, oval, very heavy, uniformly mottled dark and very light green; rind thin, but firm; flesh bright red, firm solid, but very tender, melting and sweet. Fruit retains its good quality for a long time after ripening. Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

CITRON

Grown for preserving and pickling.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25



PARSNIPS

A "Planet Jr." makes Gardening Easy



THE Parsnip is nutritious and wholesome, with a sugary sweetness peculiar to itself, and is desirable both for the table and stock feeding. It yields a large crop, and is said to be more valuable for dairy cows than either the carrot or turnip.

CULTURE—As the seed germinates very slowly, sow as early in Spring as possible, in drills 15 inches apart on deeply cultivated rich, loamy soil. Keep clear of weeds and thin to 3 or 4 inches apart. The roots of the parsnip are improved by freezing.

HOLLOW CROWN OR LONG WHITE

Root very long, white, smooth, tender, sugary, and of most excellent flavor. Very hardy; will keep through the Winter without protection.

Pkt. 10c, oz. 25c, $\frac{1}{4}$ lb. 75c, lb. \$2.50

EARLY HALF LONG

Ready in ninety days. Medium sized, easily dug, has a fine, rich flavor—good for home gardens.

Pkt. 10c, oz. 25c, $\frac{1}{4}$ lb. 75c, lb. \$2.50

PARSLEY



PLAIN

Very useful for flavoring soups, meats and for garnishing. The green leaves are used for flavoring or they may be dried crisp, rubbed to a powder and kept in bottles until needed.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 60c, lb. \$1.75



EXTRA DOUBLE-CURLED

A fine, free growing, but not large variety. The plants bear a great number of leaves, which are so abundant and so finely curled that they resemble a bunch of moss.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 60c, lb. \$1.75

TURNIP-ROOTED OR HAMBURG

The root, which resembles a small turnip, is the edible portion of this variety. Extensively grown and used for flavoring soups, etc.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 60c, lb. \$1.75

PEPPER

Sow the seeds early in hotbeds; or later, when the weather becomes warm, in open beds. When two or three inches high, transplant to a warm, mellow soil, in rows eighteen inches apart and a foot apart in the rows. Guano and hen manure are excellent fertilizers and will greatly increase the yield.

NEW PERFECTION PEPPER—Perfection is well named, as these perfect peppers are unequaled for quality and sweetness, are large, smooth, with flesh 3 times as thick as in other varieties, and the skin can be slipped off by heating or boiling a little, or you can pare them like you would an apple. Growth is vigorous. Yield is heavy and continuous, bearing until frost

Pkt. 10c, oz. 80c

RUBY KING—Very large, sweet and mild; bright scarlet.

Pkt. 10c 80c

LARGE BELL, or BULL NOSE—Large, mild, thick fleshed variety. One of the best for stuffed pickles.

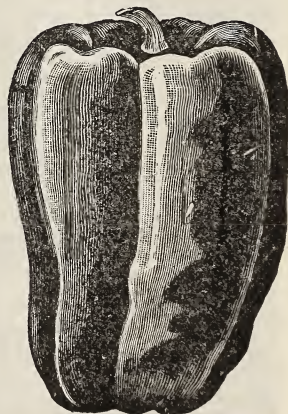
10c 80c

CAYENNE—Pods long; bright red; very pungent and used very largely with pickles when green.

10c 80c

CHILI—Pods small and pointed: brilliant scarlet; very pungent when ripe.

10c 80c



ONIONS

P. S. Co.'s
Oregon Yellow
Danvers
"The Perfect
Onion"



WE are large growers of Onion Seeds and Sets, and for years have been specializing on varieties that attain their greatest perfection in the Northwest and believe in our "OREGON YELLOW DANVERS" we have the finest type of Danver Onion ever offered, and recommend it to all commercial growers.

CULTURE—For the best results in Onion growing, the soil should be deep and rich, bottom land of rather loose texture being preferred—(beaverdam soil is best).

Sow $2\frac{1}{2}$ or 3 pounds of seed per acre, as early in the season as the ground can be put into proper condition, using some good fertilizer such as our special Onion Fertilizer, or manure supplemented with Bone Meal, Muriate of Potash, and in some cases Nitrate of Soda, the latter often being used after the plants are up, while the other fertilizers are worked into the soil before the seed is sown. Hardwood ashes may take the place of the Muriate of Potash.

Thorough clean cultivation and thinning during the growing season is necessary.

In the Fall the tops of the Onions will naturally fall to the ground and shrivel up and the roots let go their grip on the soil, then the Onions should be lifted and allowed to dry off for a day or two before storing away. If the weather remains too wet to dry off in the fields, the Onions may be put under open sheds for a while where there is a good circulation of air.

In case the tops do not die off naturally, they may be broken down and so cause the bulbs to ripen quicker but such Onions will not make good keeping bulbs, and should be disposed of as soon as possible.

To be sure of a good crop, sow none but the best of seed—it may cost a little more than a cheaper grade of seed, but it is worth more than the difference in the price.

Portland Seed Co.'s Oregon Yellow Danvers

This type was developed in Oregon and is the standard market variety in this section.

The bulbs are uniformly large, of a half globe form with small neck and have the thin, brownish-yellow skin of the Danver types and the firm, fine grained flesh is very white and mild.

Oregon Yellow Danvers produce the largest crops, ripen up hard and early, are the best keepers and bring the highest prices in the Coast markets; and as a table or market onion has no rival.

The seed we offer is produced under the most approved methods of culture and no grower can afford to plant inferior seed when we can supply **Oregon Grown Yellow Danvers.**

Pkt. 10c, oz. 30c, $\frac{1}{4}$ lb. \$1.00, lb. \$3.00

YELLOW GLOBE DANVERS

This is the type most widely known and used as a main crop variety. A very handsome, round or globe-shaped variety of large size, with thin, yellowish skin, white flesh, fine grained, mild, very firm, and the best of keepers. Ripens early.

Pkt. 10c, oz. 25c, $\frac{1}{4}$ lb. 80c, lb. \$2.50

YELLOW FLAT DANVERS

The Yellow Flat Danvers has all the good points of the Globe but is a true flat type, a good cropper, matures quickly and is a good keeper. Is fine grained, mild and white.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 65c, lb. \$2.00

The New Planet Jr. Combined Seeder and Wheel Hoe, will sow onions in a straight line and cover them at the proper depth, insuring a good stand without waste of seed. Saves time, saves work both in seeding and cultivating.

To grow Onions with the least work and most profit use a Planet Jr.



ONIONS—Continued

WHITE "BUNCHING" ONION

This variety is especially useful to market gardeners for producing an attractive "green onion." The young stalks are crisp and mild, attaining a good size before the bulb forms.

Pkt. 10c, oz. 30c, $\frac{1}{4}$ lb. \$1.00, lb. \$3.00

LARGE RED WETHERSFIELD

A standard variety; one of the most productive kinds, even in poor soil. Its good keeping qualities render it one of the best for shipping.

Pkt. 10c, oz. 25c, $\frac{1}{4}$ lb. 80c, lb. \$2.50

AUSTRALIAN BROWN

This onion resembles the Oregon "Yellow Danvers" in general appearance, but has a clear amber-brown skin that attracts buyers. It matures early, ripens uniformly, and will keep in good condition longer than any other onion. For late sowing and when necessary to replant, Australian Brown heads the list.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 60c, lb. \$1.75

WHITE PORTUGAL OR SILVER SKIN

Skin and flesh pure white; mild flavor and flat shape; grown largely for sets.

Pkt. 10c, oz. 30c, $\frac{1}{4}$ lb. \$1.00, lb. \$3.00

WHITE BARLETTA

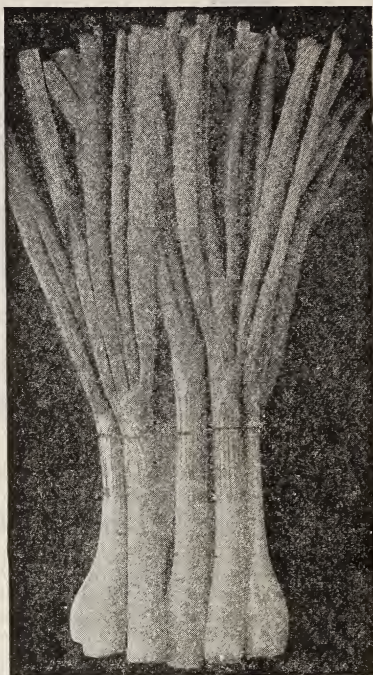
A small pure white, mild onion; fine for pickles. Pkt. 10c, oz. 35c, $\frac{1}{4}$ lb. \$1.20, lb. \$3.50

PRIZETAKER—The Genuine The Handsomest and Largest

Yellow Globe Onion

Of fine flavor, handsome shape and enormous size. A perfect globe shape, with a bright straw-colored skin; the necks are very small and the onions always ripen up hard.

Pkt. 10c, oz. 25c, $\frac{1}{4}$ lb. 85c, lb. \$2.50



Bunching Onion

QUEEN

If sown thickly, produces small, very firm bulbs, the best of all for pickling; if given more room, matures an excellent onion, that will keep all winter. Pkt. 10c, oz. 40c, $\frac{1}{4}$ lb. \$1.50, lb. \$4.50

Onion Sets—Pound Prices Postpaid

BOTTOM ONION SETS

Small onions grown from seed that has been sown too thickly to attain a large size. The small onions (about $\frac{1}{2}$ inch in diameter) thus obtained are planted out and are ready in a short time to pull as green onions for the table or bunched for the market. If left to stand they make ripe onions of the best quality, and come to maturity some six weeks earlier than a crop grown directly from the seed. Per lb. 20c

For Garlic, see page 20

TOP SETS

Produced in clusters.

Per lb. 35c

SHALLOTS

Valuable for bunching or for an early crop. The smallest sets make fine bulbs of good size, while the larger ones produce a cluster of small to medium-sized bulbs. Light brown skin; mild, white flesh. Per lb. 35c

DIAMOND ONION FERTILIZER 1000 Pounds to the Acre

Our Free Book "FERTILIZER" tells things you should know about fertilizers—gives analyses, values and crop requirements—tells what fertilizers are and how to use them.

OKRA OR GUMBO

IMPROVED DWARF GREEN

Very early, with long, green, slender pods.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ oz. 45c, lb. \$1.25

WHITE VELVET

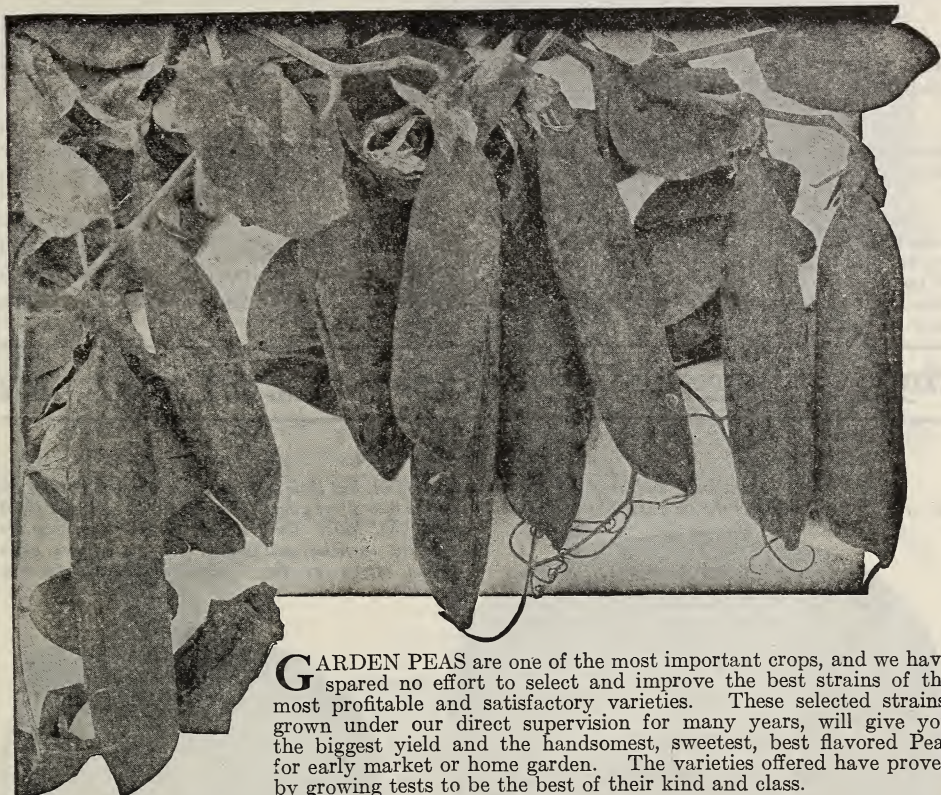
The large pods are smooth or very slightly ribbed, remain tender a long time.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

GARDEN PEAS

"Diamond Quality." Selected Hand Picked

Prices on Peas, postpaid: Pkt. 15c, ½ lb. 25c, 1 lb. 40c, 10 lbs. \$3.50



GARDEN PEAS are one of the most important crops, and we have spared no effort to select and improve the best strains of the most profitable and satisfactory varieties. These selected strains, grown under our direct supervision for many years, will give you the biggest yield and the handsomest, sweetest, best flavored Peas for early market or home garden. The varieties offered have proved by growing tests to be the best of their kind and class.

LITTLE MARVEL

Splendid New Dwarf Pea for Home or Market

The dwarf, bushy vines averaging 15 inches are loaded with firm, square-ended pods 2½ to 3 inches long, tightly filled with plump, luscious, deep green peas. "Little Marvel" is as early as "American Wonder," fully equals the superb quality of "Nott's Excelsior," and far outyields these two popular sorts.

LAXTONIAN

A new, early, dwarf, robust, large podded pea of superior excellence; growth averaging 16 inches. The large pods are well filled, holding eight to ten peas. "Laxtonian" is so highly recommended that you should give it a trial.

ALASKA, OR EARLIEST OF ALL

A smooth, blue pea, of even, vigorous, growth and extra early maturity. Vines 2 to 3 feet high, unbranched, bearing four to seven long pods, which are filled with medium-sized, bright green peas of excellent flavor. A great favorite with our market gardeners for Fall or early Spring planting.

PREMIUM GEM

Our select strain of this splendid variety is one of the earliest and best of the dwarf garden Peas. The vigorous, luxuriant vines average about 15 inches in height and are heavily loaded with well filled pods of rich, fine flavored sugary peas. Continues in bearing for a longer period than most varieties in this class. A splendid home garden pea for successive planting and for canning.

EARLY DWARF GRADUS

Slightly earlier and more dwarf than the regular GRADUS. Vines moderately stout, pods medium green, rather large and well filled with dark green peas of exceptional quality.

AMERICAN WONDER

One of the most popular and best of the early wrinkled sorts. A great favorite for family use. Has stout, branching vines, covered with well-filled pods containing seven or eight large, exceedingly sweet, tender and well-flavored peas. Height 10 to 12 inches.



PEAS—Continued

Main Crop Varieties

Great Favorites with our Market Gardeners

GRADUS

This early, wrinkled pea bears pods of large size and combines quality with earliness. It is very hardy; can be planted fully as early as the smooth peas; growth, vigorous and healthy; vines $2\frac{1}{2}$ feet in height; very prolific. The quality and flavor are delicious and the peas remain tender and sweet for a long time.

TELEPHONE—TALL

Our Western grown selection of this popular favorite and standard market variety is immensely productive, the extra large pods being filled with peas of the finest quality, the luscious sugary flavor not being excelled by any other variety. A strong, rapid grower, averaging 4 to 5 feet.

IMPROVED STRATAGEM

One of the best of the large podded peas; the pods are of immense size filled with large, dark green, wrinkled peas of the finest quality; vine of medium height, but very stocky, with very broad, light green leaves, and bearing an abundance of large, handsome pods.

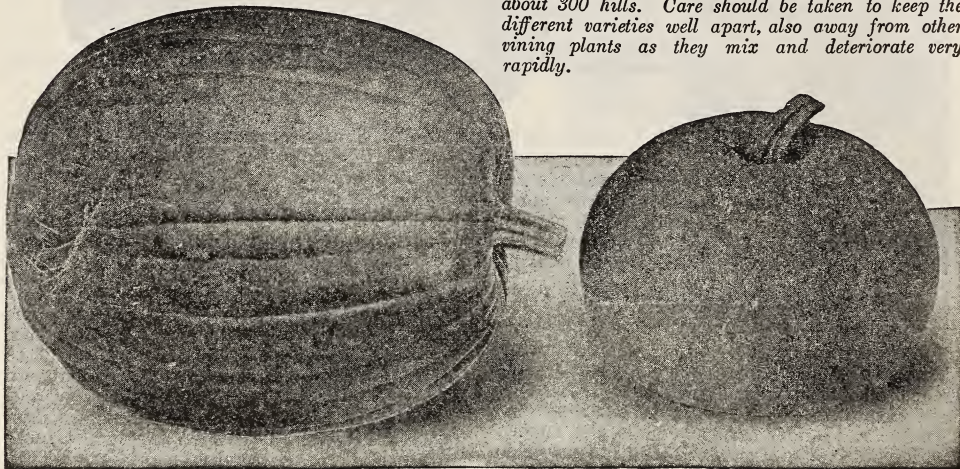
YORKSHIRE HERO

One of the largest, sweet, wrinkled kinds; vines strong and spreading; pods of good size and well filled; much in use, and has enjoyed a long popularity; medium late; bears a long time; height, $2\frac{1}{2}$ feet.

Mulford Cultures FOR Garden Peas increases the yield, enriches the soil.
Garden size 35c, acre \$1.50, 5 acre \$5.00

PUMPKIN

CULTURE—Pumpkins will grow on any good farm land, but their size and quality will depend on the culture and fertility of the soil. Plant early in May, in hills 6 to 8 feet apart. One pound of seed will plant about 300 hills. Care should be taken to keep the different varieties well apart, also away from other vining plants as they mix and deteriorate very rapidly.



Sweet or Sugar and Winter Luxury are good Pie Pumpkins

WINTER LUXURY

The best flavored pie pumpkin grown: enormously productive; excellent keeper; medium size; color, golden-russet, finely netted; flesh, deep golden, sweet, tender and very thick; none better.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 40c, lb. \$1.25

MAMMOTH TOURS

A productive French variety; grows to an enormous size.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 40c, lb. \$1.25

LARGE YELLOW

Large, round; deep, glossy yellow. Vines vigorous and very productive; good keeper. Grown extensively for stock feeding.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 40c, lb. \$1.25

SWEET OR SUGAR

A handsome and productive small pumpkin: skin, orange; flesh, deep yellow, fine grained, very sweet. This is the famous "New England Pie Pumpkin."

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

GIANT OF ALL

"King of Mammoths"

This colossal Pumpkin is almost a globe in shape. The skin is of a beautiful, rich golden yellow, flesh firm, fine grained and deep yellow, sweet flavored, very thick and of excellent quality for so mammoth a variety. These Pumpkins attain an enormous size and will carry away prizes at your county fairs.

Large Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 60c, lb. \$1.75

RADISHES

CULTURE—To secure Radishes with crisp, tender flesh, grow them quickly in rich, loose soil, and gather before reaching full size. Our Radish Seed is strictly of the finest grade, being grown from carefully selected roots. Frequent plantings should be made for succession, so that a supply of fresh, tender Radishes in the finest condition may be had at all times.

EARLY CRIMSON GIANT

The Largest Early Scarlet Turnip-Shape Radish

An early Radish, double the size of any of the turnip-shaped type, but, notwithstanding its immense size, does not get hollow and pithy. The flesh is a sparkling white, solid, crisp, juicy and of the mildest flavor. The shape of bulb varies from round to almost oval, but the bright, deep crimson color of skin remains quite constant. Excellent for both forcing and open ground. Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

EARLY SCARLET TURNIP

A small, round, red turnip-shaped Radish, with small top and of very quick growth, very early; rich color and crisp, tender flesh.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50



Crimson Giant—Best Scarlet Turnip Radish

EARLY SCARLET TURNIP—White Tipped

A beautiful variety; deep scarlet with white tip. Very early. Has a small top, and may be planted closely. Flesh crisp, tender and sweet. Cannot fail to give satisfaction as a forcing Radish.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

EARLY LONG SCARLET, SHORT TOP

This bright scarlet, small topped sort is uniformly straight, smooth, brittle and crisp, and is an excellent sort for private gardens or market use.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

LONG BRIGHTEST SCARLET, WHITE TIPPED

This is the brightest and handsomest colored Scarlet Radish known. The lower third of the root is snow white; very attractive. Extra early and flesh very tender. Valuable for forcing or open ground.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

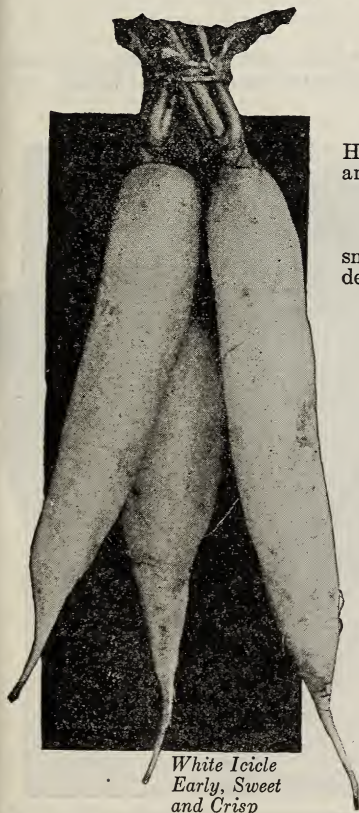
WHITE ICICLE

This superb Radish is the finest and longest of the very early, pure white varieties. Planted in the Spring is ready for use in twenty to twenty-five days; their long, slender form and pure, paper-white skin are most attractive when bunched for market. This Radish is not only crisp and tender when young but also retains these qualities until the roots attain large size; is excellently adapted for forcing purposes or successive sowing in the open ground and gives a continuous supply of tender, crisp Radishes for the table or market throughout the season.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 60c, lb. \$1.75

EARLY SNOWBALL

Grand improvement on the White Box or White Turnip Radish, so popular for several years. Handsome in shape, very early, and has but few leaves, is of a clear white color, solid, juicy, crisp, tender and unsurpassed in flavor. A good sort for forcing. Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50



*White Icicle
Early, Sweet
and Crisp*

RADISHES—Continued

IMPROVED CHARTIER

Roots long, tapering, and attaining a very large size. Of rapid growth; remains crisp and tender until fully grown. Color, scarlet above shading into white at the tip. Flesh white and mild flavored.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

FRENCH BREAKFAST OR HALF LONG
Medium size, quick growth, crisp and tender; lower end and taproot white.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

LADY FINGER, OR WHITE VIENNA

Of rapid growth and beautiful shape. Skin and flesh snow-white; very juicy, firm, crisp and tender; the finest of Long White Radishes.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

Winter Radishes

CHINA ROSE WINTER

One of the best Fall and Winter varieties; a favorite with market gardeners, bright rose color; flesh white, firm and of superior quality.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

BLACK SPANISH LONG

Standard Winter sort; has good flavor and keeps well.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

A Real
**ROOT
MAGGOT**
Remedy



Easily applied, inexpensive, not harmful to plant life; but a valuable fertilizer and stimulant in powder form.

Protects CABBAGE,
RADISHES, TURNIPS, ONIONS, ETC.

FOR PRICES SEE SPRAYS

SPINACH

This is an important gardener's crop, of easy culture. For Spring and Summer use, sow either broadcast or in drills one foot apart and one inch deep, as early as the ground can be worked, and every two weeks for a succession.

SAVOY LEAVED—BLOOMSDALE

Very early; of upright growth; leaves pointed. Plant in the Autumn for Spring use; grows quickly.

Pkt. 10c, $\frac{1}{4}$ lb. 25c, lb. 75c

NEW ZEALAND

A good summer variety, as when once established by early planting resists heat. Leaves soft, thick and fleshy. Differs in appearance from other varieties but is prepared in the same manner.

Pkt. 10c, oz. 25c, $\frac{1}{4}$ lb. 75c, lb. \$2.25

IMPROVED THICK LEAVED

Variety which grows very rapidly, forming a cluster of large, very thick, slightly savoyed leaves of fine color, and quality when cooked. Best for market gardeners.

Pkt. 10c, $\frac{1}{4}$ lb. 25c, lb. 75c

PRICKLY WINTER

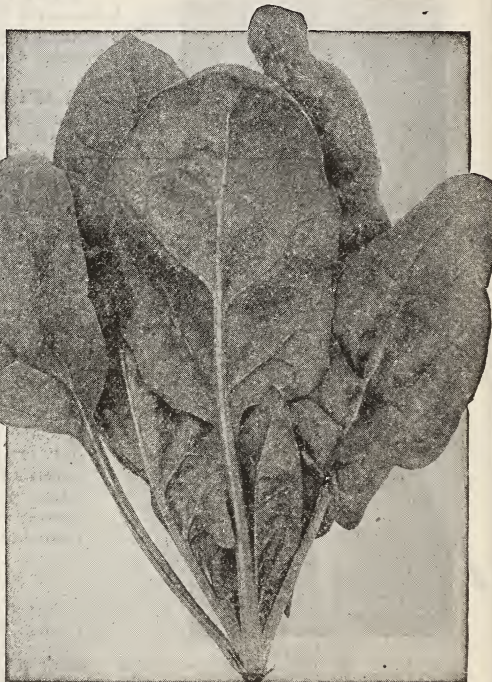
Hardest variety; must be sown in the Fall; seed prickly; leaves long, pointed, thick and succulent.

Pkt. 10c, $\frac{1}{4}$ lb. 25c, lb. 75c

LONG STANDING

An improved variety for general use; large, fleshy savoyed leaves remain in an edible condition over a long period, being very slow to go to seed.

Pkt. 10c, $\frac{1}{4}$ lb. 25c, lb. 75c





TOMATOES



THE NEWER types of hardy, prolific Tomatoes are better adapted to the cool Coast climate than the older sorts and splendid crops are now being grown where heretofore it was thought Tomatoes would not thrive. A good plan is to try several varieties and find which is best suited to your special conditions.

CULTURE—Sow early in hotbeds, and as soon as they have four leaves transplant into shallow boxes. Harden off, and set out as soon as danger of frost is past. An ounce of seed will produce 3,000 to 4,000 plants.

If blight appears use "Bordeaux" but it is better to use as a preventive before blight strikes the plant, and as a control measure for flea beetles, spraying the under side of foliage.

JOHN BAER

This variety is the result of fifteen generations of breeding; it produces perfect, solid, high crown, brilliant red tomatoes. They ripen ten days before Earliana, bearing 50 to 100 fruits per plant. The flavor is deliciously sweet. The plant will stand plenty of fertilizer without going to vine. Keeps well; is a good shipper; a prolific, continuous bearer, and has the unusual and remarkable feature of being easily peeled, the skin slipping readily from the rich, firm flesh. Resistant to wilt and other diseases.

Pkt. 10c, oz. 50c, $\frac{1}{4}$ lb. \$1.65

COMET—FORCING

The very best forcing variety and a general favorite with greenhouse growers. Color is a beautiful scarlet; fruits are of good size, very smooth and uniform.

Pkt. 10c, oz. 50c

NEW STONE

Popular with canners, growers and market gardeners. Its solidity and carrying qualities are remarkable. Color a desirable red. In shape, perfectly smooth and thicker from stem to blossom end than most varieties, making it very handsome and salable.

Pkt. 10c, oz. 45c, $\frac{1}{4}$ lb. \$1.35



CHALK'S EARLY JEWEL

Large, bright red, smooth, round fruits, very deep and colored evenly up to the stem; very solid, almost seedless and of the finest flavor.

Vines are vigorous, not subject to blight, and yield fully equal to or better than Earliana.

We recommend Chalk's Early Jewel as the very best early Tomato for either market or home gardens, as it has given us uniformly better satisfaction under the varying conditions of soil and climate in the Northwest.

Pkt. 10c, oz. 45c, $\frac{1}{4}$ lb. \$1.25

BONNY BEST

Bonny Best has given splendid results wherever tried and being early, hardy and very productive can be recommended for outside planting wherever tomatoes can be grown. It is also a good forcing variety. Fruit smooth, round, slightly flattened, solid and of a bright scarlet. Quality excellent.

Pkt. 10c, oz. 45c, $\frac{1}{4}$ lb. \$1.25



SPARK'S EARLIANA

One of The Earliest Tomatoes

Of large, uniform size and beautiful red color. Ripens thoroughly all over, the stem end coloring up perfectly. Almost seedless and very solid. A most vigorous grower and heavy bearer, continuing until frost. Succeeds everywhere, and especially recommended for this Coast.

Pkt. 10c, oz. 45c, $\frac{1}{4}$ lb. \$1.35

TOMATOES—Continued

LIVINGSTON GLOBE

One of the best Early Tomatoes Hardy and Blight Resistant

Fruits are of large, even size; very early; ripen clear through and are always smooth, firm and round with solid meat and few seeds. Color is a beautiful glossy, rose-tinted purple; very productive. Livingston's Globe is of delicious table quality and will keep longer than any other tomato. Is also an excellent forcing variety. Pkt. 10c, oz. 50c, $\frac{1}{4}$ lb. \$1.50

DWARF CHAMPION

Dwarf, upright growth; smooth, purple fruit. Pkt. 10c, oz. 50c, $\frac{1}{4}$ lb. \$1.65

NEW—CARTER'S SUNRISE

A very early English variety of fine flavor and healthy, vigorous growth, with solid flesh and few seeds; very even, smooth and shapely. Color, bright, rich scarlet. Is also one of the best forcing varieties.

Pkt. 10c, oz. 50c, $\frac{1}{4}$ lb. \$1.65

GOLDEN QUEEN

A first-class, large, smooth, pure yellow tomato. Pkt. 10c, oz. 50c, $\frac{1}{4}$ lb. \$1.65

YELLOW PEAR

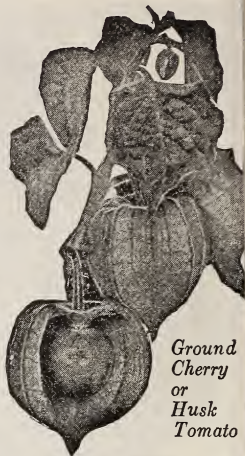
A small pear-shaped tomato, borne in great profusion, vine literally covered with large clusters of fine, solid fruits; excellent for preserving, and for use in salads and cooking is superior, as flesh is not watery. Very hardy. To this class belongs Yellow Plum and Yellow Cherry. All same price.

Pkt. 10c, oz. 75c, $\frac{1}{4}$ lb. \$2.50

GROUND CHERRY OR HUSK TOMATO

Grows to great perfection under ordinary culture, yielding abundantly; very much prized for preserving; should be in every garden.

Pkt. 10c, oz. 75c, $\frac{1}{4}$ lb. \$2.50

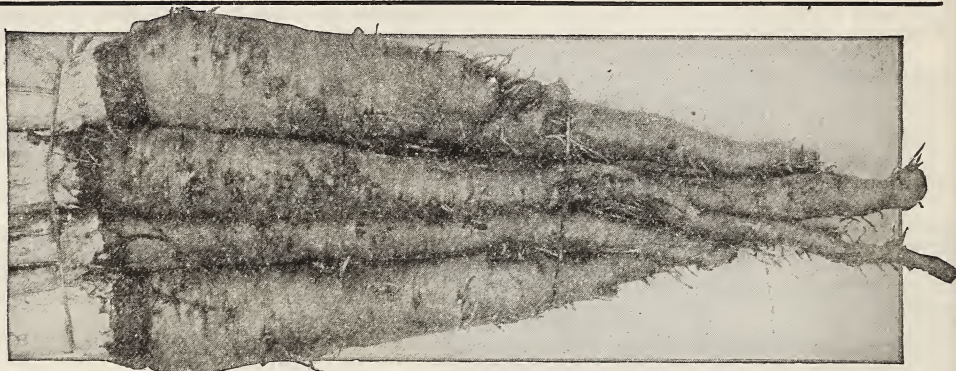


Ground
Cherry
or
Husk
Tomato

"TomatoCulture"
By Root & Day
40 cents, postpaid

Tomato Plants

STANDARD VARIETIES FOR SEASONABLE DELIVERY—FINE, HEALTHY TRANSPLANTED AND POT GROWN PLANTS—Safely packed and shipped to any point in the Northwest. See Plant Dept.



SALSIFY or Vegetable Oyster

Salsify is a nutritious and wholesome vegetable, having the appearance of a small parsnip in flavor closely resembling oysters, for which it is, in that respect, a good substitute. It is rapidly coming into more general use.

CULTURE—Sow early in Spring, in drills a foot apart, and when 2 or 3 inches high thin to 3 or 4 inches. Its general culture is the same as that recommended for carrots. The roots are perfectly hardy and may remain in the ground during Winter, or may be stored in dry earth or sand.

MAMMOTH SANDWICH ISLAND—The leading variety; produces a large crop of straight, smooth roots.

Pkt. 10c, oz. 30c, $\frac{1}{4}$ lb. \$1.00, lb. \$3.00

TOBACCO

CULTURE—Sow the seed thinly in beds, as early as they can be well prepared. Cultivate thoroughly, transplanting when 6 inches high to rows $\frac{1}{2}$ foot apart each way.

CONNECTICUT SEED LEAF

Hardy, and the best adapted to cool localities.

Pkt. 10c, oz. 75c

HAVANA

Of fine texture and delicate flavor.

Pkt. 10c, oz. 75c

"Diamond Quality" SQUASH



CULTURE—The plants are very tender and sensitive to cold, and planting must be delayed until settled warm weather.

The general principles of culture are the same as those given for cucumbers and melons, but squash is less particular as to soil. The Summer varieties should be planted four to six feet apart each way and the winter sorts eight to ten feet. Three plants are sufficient to a hill.

To protect from beetles, young plants should be screened,

and growth hastened by the application of our Diamond Fertilizer. Dusting the young plants thoroughly with "Corona" Dusting Powder, including the stem where it enters the soil, will often save them.

Summer Varieties

WHITE BUSH

The best Summer sort for the home garden or market; very productive and of good size.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

EARLY SUMMER CROOKNECK

Early, prolific, solid, curved neck; skin yellow, thin, hard and warty; flesh tender and of good quality. Earlier and larger than the ordinary Crookneck.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

Winter Varieties

IMPROVED HUBBARD

The best seller and most popular variety on our list. Rind dark green, warty and very hard. Flesh light orange, very dry, sweet and rich flavored. Has no superior. Long keeper.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

MAMMOTH CHILI

The largest of all Squashes, growing to an enormous size, often weighing over 200 pounds, while its rich, fine flavored flesh insures its value for all purposes. Its size makes it valuable for stock feeding.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 60c, lb. \$1.75

GOLDEN HUBBARD

The same in size, shape and quality as the well known Hubbard Squash, except that it is a bright red or golden color, and somewhat earlier. Good keeper.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 65c, lb. \$2.00

BOSTON MARROW

Skin yellowish, very thin; flesh dry and fine grained; of unsurpassed flavor.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

SIBLEY OR PIKE'S PEAK

Shell smooth, thin and of a pale green color; the flesh is thick, solid, deep orange color; very dry, fine grained with a delicate flavor.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

BANANA

The squash grows from one to 2 feet in length. The skin varies from a bright yellow to a dark olive green. Flesh firm and solid, of beautiful orange-yellow and excellent quality. It keeps from one season until another. When quite young it is excellent to cook as a marrow. Pkt. 10c, oz. 25c, $\frac{1}{4}$ lb. 80c, lb. \$2.50





TURNIPS

CULTURE—For early use sow the small sorts as soon as the ground can be worked in the Spring, in drills 14 inches apart. As the seed is very fine, it should be covered but slightly, except in very dry weather. For Fall and Winter use, sow the early kinds during July, August and September.

Early Garden Turnips



EARLY PURPLE TOP MILAN

This variety is ready for the table sooner after planting than any other yet introduced. Top small, erect, strap-leaved; bulb a deep purple above, white underneath; flesh white, firm and delicate. Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 60c, lb. \$1.75



EARLY WHITE MILAN

Same as Purple Top Milan, but pure white, sweet and tender; best early market variety. Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 60c, lb. \$1.75

PURPLE TOP STRAP LEAF

A leading white-fleshed variety, and one of the best, either for the family, market garden or field crop. It is medium size, and produces a large crop. The flesh is firm but tender, and of a superior rich buttery flavor. A good keeper. Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 35c, lb. \$1.00

EARLY WHITE FLAT DUTCH

One of the very best and most universally grown. Small, erect top, round, flat; flesh white firm, but very tender and sweet. Of quick growth, it is soon ready for the table and keeps well. Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 35c, lb. \$1.00

EARLY SNOWBALL

Early round turnip, maturing in seven weeks, is of perfect form, snowy whiteness, crisp, solid, fine flavor.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

GOLDEN BALL

Undoubtedly one of the most delicate and sweetest yellow-fleshed turnips yet introduced. Not of large size, but firm, hard and most excellent flavor. Keeps well and is superior as a table variety. It is extensively used by market gardeners. Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.25

Main Crop Turnips

COWHORN

Sometimes called Long White. Slightly crooked. Pure white except a little shade of green at the top. Grows half out of the ground and is of very rapid growth. Is delicate and well flavored. Has proved itself one of the best stock turnips ever introduced in Oregon; an immense yielder. Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

POMERANIAN WHITE GLOBE

One of the most productive kinds, and in good, rich soil, roots will frequently grow to 12 pounds in weight. It is of perfect globe shape; skin white and smooth; leaves dark green and of strong growth.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 35c, lb. \$1.00

PURPLE TOP WHITE GLOBE

A large, globe-shaped variety: purple above the ground. It is handsome and of excellent quality; recommended both for family garden and field crop.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 35c, lb. \$1.00

LARGE WHITE NORFOLK

A white variety, usually attaining a very large size. Extensively grown for stock feeding. The leaves are also used for greens. It is hardy and may remain in the ground all Winter. Yields very large crop.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

WHITE EGG

Is perfectly smooth, of a pure, clear white, growing half out of the ground, and at times to the size of a Ruta Baga, being a very choice kind for table use; of excellent flavor; sweet and mild. Pulls clean from the ground, thin, snow-white skin.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

YELLOW ABERDEEN

Round, medium size; light yellow. Produces a large crop; is hardy and keeps well; flesh very firm but tender and sweet. A great favorite with the dairymen.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c, lb. \$1.50

TURNIPS—Ruta Baga or Swede

For feeding stock in Fall and Winter there is nothing superior to Turnips or Ruta Bagas, as they are much liked by all kinds of stock and serve to keep them in good condition. A profitable crop.

IMPROVED AMERICAN PURPLE TOP

The leading variety; large, immense yielder. Superior in every way.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

MONARCH OR TANKARD

Very solid, fine grained, of fine flavor; grows well out of the ground and yields large crops.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

SKIRVING'S

Enormously productive; flesh yellow, solid and sweet.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

WHITE SWEET RUSSIAN

Excellent for table or stock. Very large size; white, solid, sweet and rich; keeps well.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c, lb. \$1.25

Magotite Prevents Root Maggots

Cut Worm Food

Protects Tomatoes, Cabbage, Melons, Cucumbers and Other Plants—easily applied—inexpensive. Price, 1-lb. pkg. 50c



SEED POTATOES

POTATO PROFITS

Few farm crops are more profitable than potatoes. Potatoes are of such great importance as food, giving quick, sure, cash returns and are so valuable in crop rotations, that we maintain a separate potato department under the personal supervision of a trained expert.

LET US ASSIST YOU

We are glad to offer you the profit of our experience as growers, which should be of especial value at this time when there is a general awakening to the necessity for better cultural methods, standardization of crops and, above all, a systematic scientific selection of seed.

WE ARE SPECIALISTS

Our equipment for storage and handling, in addition to our own expert personnel, gives the best opportunity to apply continuously the closest attention to our seed potato production in an effort toward—

- | | |
|---|---|
| 1. Increased yield and uniformity of yield. | 5. General vitality. |
| 2. Hill averages of marketable size. | 6. True conformity to type. |
| 3. Freedom from and resistance to disease. | 7. Fixed color and eye characteristics. |
| 4. Cooking qualities. | 8. Trueness to name. |

CHOOSING A VARIETY

There is no one best potato, but we are offering those varieties which have proved standard with buyers within as well as those out of the State who purchase Oregon stock.

Profit lies in yield more than market price. And profitable yields come only in two ways—**Good Seed, Good Seed Bed.**

Good seed potatoes do not just happen, nor are they a matter of promiscuous pick-up—they are the result of being carefully selected and grown especially for seed purposes. As many diseases are difficult to recognize, even by trained observers, good strains often require several years growing under different conditions, removing many plants each season before they can be called free enough from disease to sell as clean seed capable of high yields.

MAKE THE YIELD PAY

Good Seed insures the **Good Crop**. When digging time comes in the fall your success will depend on the kind of seed you planted in the spring.

OUR PRICES

Considering, as we do, our potato seed stock equal, if not superior, to any potato seed stock on the market, our price is the lowest—consistent with the time and effort spent in "building up" this seed. Even if you increase your yield by a small percentage you will more than cover the cost of your seed, and good seed is capable of doubling the yield over inferior seed.

LET US SERVE YOU

Let us be instrumental in aiding you toward profitable potato growing through our Diamond Quality seed potato supply and service.

TABLE OF YIELD

This table shows how slight increases in yield per hill go to make up total yields which change losses into gains:

No. Hills Per Acre	Yield Weight Per Hill	Yield Bushels Per Acre
10722	8 oz.	90.0
10722	10 oz.	121.4
10722	1 lb.	178.7
10722	2 lb.	357.4
10722	3 lb.	536.1
10722	5 lb.	893.5
10722	10 lb.	1787.0

Planting 15 by 36 inches.

AMOUNT TO PLANT PER ACRE

Planting 3 feet by 15 inches with—

- | | | |
|---|-----------------------------------|------------------------|
| 1 | 8 oz. potato to the hill takes 54 | 100 lb. sacks per acre |
| 1 | 4 oz. potato to the hill takes 27 | 100 lb. sacks per acre |
| 1 | 2 oz. potato to the hill takes 12 | 100 lb. sacks per acre |
| 1 | 1 oz. potato to the hill takes 6 | 100 lb. sacks per acre |

Our experience and that of Agricultural Colleges proves that under average conditions the larger the seed piece the larger total yield and net value of crop, i. e., value of marketable tubers less value of seed.

Whole seed gives the best results where care has been taken to prevent previous sprouting before planting. If seed starts to sprout it may be spread out thinly in the light where stubby green sprouts will result, which are not damaging to the seed's vitality as are the long white ones of the bin.

Rolling in Gypsum (Land Plaster) for cut seed is a valuable practice; and cut seed should be planted soon after cutting. We find the blossoms or bud end the most vigorous and the central or terminal bud should not be damaged in cutting. Blocky seed pieces are to be preferred to the longer ones which have more cut surface exposed.

TREATING POTATOES

Due to certain skin diseases—such as *Rhizoctonia* and Scab, which are apt to be present on even the most carefully grown seed stock—treating potatoes before planting with Corrosive Sublimite (Mercuric Chloride, which can be purchased at any drug store) is **very essential**. We shall be glad to mail you full information regarding this treatment upon request.



EARLY VARIETIES

Portland Seed Company's "EARLIEST OF ALL"

Can Be Had Ready for Cooking 9 Weeks From Planting. Mature in 12 Weeks

ORIGINALLY a selection from Early Eureka introduced by Portland Seed Co., 1908, showing a marked difference in habit and greatly increased yield which years of careful re-selection have firmly fixed and improved. "Earliest of All" is a shallow eyed, white skinned variety of vigorous growth and does not make a second growth. The tubers are smoother and have fewer eyes than other varieties of this type. The white blossoms also easily distinguish it from Irish Cobbler, which has a purple bloom. Not affected by summer drouths owing to its quick growth and early maturity. A good keeper. **The earliest of all early potatoes.** An ideal forcing potato for market gardeners.



"Earliest of All"

Prices: 10 lbs., postpaid, \$1.00.
Write for prices in quantities.

BE SURE of getting the genuine "Earliest of All." Beware of substitutions and varieties that are "just the same." Such varieties of somewhat similar appearance and often sold as "Earliest of All" Irish Cobbler, British Queen, Idaho Rurals, Ea. Victor, and other round varieties.

EARLY ROSE

Strong, vigorous vines of medium height. Flowers white, rather abundant. Tubers quite smooth, elongated or oblong, stem and seed end rather blunt. Eyes shallow, but sharp and strongly marked; skin thin but tough. Flesh creamy white sometimes streaked with red, solid and brittle, rarely hollow. Our strain of this grand "old timer" is exceptionally good.

Prices: 10 lbs., postpaid, 65c. Write for prices in quantities.

AMERICAN WONDER

One of the earliest and best main crop varieties. Strong grower of branching habit and great producer. Tubers white, large and uniform in size; elongated and slightly compressed. Blooms white; foliage rich dark green. Our stock is of exceptional quality, selected to our standard.

Prices: 10 lbs., postpaid, 65c. Write for prices in quantities.



American Wonder

In justice to our customers we are not cataloging quantity prices on potatoes; but will be pleased to make a firm price on any quantity wanted.

EARLY WHITE PRIZETAKER

One of the finest of all early sorts; oblong in form, like a Burbank, with white, smooth skin and few eyes. It is a very superior cooking potato, baked or boiled, cooking up dry and floury.

White Prizetaker has important advantages over other early Potatoes, as its white skin, large size and good keeping qualities make it an ideal main crop variety, that sells at the best price.

PRICE, 10 lbs., Postpaid, \$1.00.

Fertilizers Increase Yield and Profits

Reports of experiments show an increase of 48 sacks per acre under irrigation and 43 sacks per acre under dry conditions by the use of 500 pounds per acre of P. S. Co.'s Vegetable Fertilizer, as follows:

Fertilized—Irrigated.....219 sacks
Not Fertilized—Irrigated.....171 sacks

48

Fertilized—Dry Farming.....110 sacks
Not Fertilized—Dry Farming... 67 sacks

43

A very interesting point brought out by his experiments is the ratio of increase of the non-irrigated crop as compared to the increase under irrigation. The actual increase being about the same. These trials were carefully made and recorded, and demonstrate the great value of our fertilizers under all conditions.



MAIN CROP AND LATE VARIETIES

PRIDE OF MULTNOMAH

Excels in Yield and Table Quality



PRIDE OF MULTNOMAH

Potato was introduced by us in 1909. Tubers are uniform in size, of the ideal elongated type with smooth, thin white skin; eyes shallow; flesh snow white, of finest table quality; flowers white; vines medium large of bushy growth; withstands drought; and is blight and disease resistant to a remarkable degree.

Pride of Multnomah is the leader in its class, being superior in yield, uniformity and table quality—holding the record yield for the State of California from our Oregon grown seed—790 bushels of clean, uniform stock, the prize acre at P. P. E., San Francisco, 1915.

Prices: 10 lbs. postpaid, 65c. Write for prices in quantities.

BRITISH QUEEN

A standard market potato in southern California, the shape being a flattened oval rather elongated, having few eyes and a beautiful creamy white skin. Abundant foliage and lavender flower—fading to light. The strain we have is the best. A heavy yielder.

Prices: 10 lbs., postpaid, 65c. Write for prices in quantities.



British Queen
BURBANK

POTATO GROWERS SHOULD PRACTICE A FOUR-YEAR ROTATION

Grain, clover, corn, potatoes. Scab and Rhizoctonia are not so troublesome when corn follows clover before potatoes.



Netted Gem

NETTED GEM

California Russet, Russet Burbank, Yakima Gem, Idaho Russet, etc.

A splendid main crop late potato that gives good results in dry sections. Tubers are elongated, medium sized with russet netted skin; flesh white; eyes are flush with surface; good keeper and produces a fine yield. This is the variety grown extensively by irrigation in Washington and Idaho for baking. Our stock is extra choice of the most improved type.

Prices: 10 lbs., postpaid, 65c. Write for prices in quantities.



Burbank

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG

Our Monthly Planting Calendar for Vegetables


	Under Glass	Open Ground	Setting
ASPARAGUS—All varieties.....		March to May	Fall or Spring
ARTICHOKE—Globe.....		March and April	Fall or Spring
BEANS—Bush.....		May to July	
Pole.....		May and June	
BET—Early.....		March and April	
Late.....		April to July	
Mangles Sugar and Swiss Chard.....		April to June	
BRUSSELS SPROUTS.....		April to June	July to September
BROCCOLI.....		April to June	July to September
CAULIFLOWER—Early.....	February		March and April
Late.....	March	May and June	May to July
CABBAGE—Early.....	February		March and April
Late.....	March	April to June	May to July
CARROT—Early.....		March and April	
Late.....		April to June	
CELERY—Early.....	February		April and May
Late.....		April and May	May and June
CHERVIL.....		April and May	
CHICORY.....		April and May	
CHIVES.....		March and April	April and May
COLLARDS.....		April and May	
CORN—Sweet Early.....		May and June	
Sweet Late.....		May to July	
CORN SALAD.....		April to June	
CRESS.....		March to June	
CUCUMBER.....	March	May and June	May to July
EGG PLANT.....	March		May to July
ENDIVE.....		April to July	
HORSE RADISH.....			March to May
KALE.....		May and June	June and July
KOHLRABI.....		April to June	May to July
LEEK.....	February	March to May	April to June
LETTUCE—Early.....	February	March and April	April and May
Late.....		April to August	May to August
MELON.....	February	May and June	May and June
MUSTARD.....		March to October	
OKRA.....		May and June	
ONION—For Dry Onions.....	February	March to May	April to June
ONION SETS—For Bunching.....		March to October	
PARSLEY.....		March to June	
PARSNIP.....		March to June	
PEAS—First Early.....		October and November	
Second Early.....		March to July	
Late.....		April to July	
PEPPER.....	February and March		May and June
PUMPKIN.....		May and June	
RADISH—Early.....	February	April to September	
Winter.....		May to September	
RHUBARB.....		April and May	November to April
SALSIFY.....		April to June	
SPINACH.....		April to October	
SQUASH—Summer.....	February	May and June	May and June
Fall and Winter.....		May and June	
TOBACCO.....	February and March		May and June
TOMATO.....	February to April		May and June
TURNIP—Early.....		March to May	
Late.....		April to September	
Ruta Baga.....		April and May	
HERB SEEDS.....		April and May	
POTATOES.....		April to July	

Hints on Fertilizing the Garden

Where no manure is used the fertilizer should be spread over the surface of the finely prepared seed bed at the rate of five pounds for a plot ten feet square, just before planting. The surface soil should then be thoroughly raked so as to mix the fertilizer evenly to a depth of two inches. Never place seed or transplanted plants in direct contact with fertilizer.

Thoroughly mixing of the fertilizer with the soil is essential to prevent injury of seed or roots. **Tomatoes, Potatoes, Spinach** and some other crops requiring rather long growing seasons, are materially benefited by a second application of fertilizer when half grown. Side dressings of this kind should be scattered between the rows at the rate of four ounces (one-half pint) to ten feet of row, when rows are spaced two feet apart; and pro rata for rows spaced a greater or lesser distance. To insure even distribution mix the fertilizer with fine, dry earth just before spreading.

Forcing Growth—Sodium Nitrate is a very strong stimulant for young growing plants. Vegetables grown for their leaves and stems, like lettuce, cabbage, celery, etc., can be improved by a light application or two of Sodium Nitrate in the early growing period. Nitrate of Soda is readily soluble. **Use one pound to a ten-quart pail of water.** Apply this in small amounts some little distance from the plant. Repeat in from twenty to thirty days.

 Our Booklet "FERTILIZERS" tells what you should know about Fertilizers—what they are for, how and when to apply—and is mailed free on application.

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG

FIELD AND FARM SEEDS

THERE are many varieties of grasses and forage plants offered by Eastern seedsmen (often under new names) that will not give profitable crops in our climate, and to avoid disappointment, we refer you to the following list, which has been carefully selected and contains the most desirable varieties for general and special purposes.

A careful reading of the following pages will give you much valuable information that has required years of observation and experimenting to obtain.

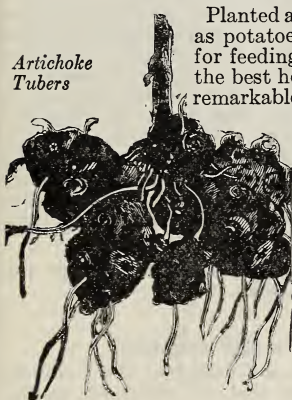
IMPORTANT—Read Carefully—

Clover, Grass and Field Seeds are subject to market changes, therefore we cannot print prices good for any length of time. When ready to buy, write us for special prices, stating quantity wanted; or send in your order. **We guarantee that we will give you full value for the money sent.** Pound prices quoted are postpaid. Owing to fluctuations in prices, prices given months ahead are oftentimes misleading. **Write for prices.**

MAMMOTH RUSSIAN SUNFLOWER has been found to be one of the best silage plants grown. Feeding qualities are high and owing to its great tonnage yield is one of the cheapest feeds obtainable. **Try it. See page 44.**

ARTICHOKES

*Artichoke
Tubers*



Planted and cultivated same as potatoes. Of great value for feeding stock. They are the best hog feed known; are remarkable for fattening properties, great productiveness (over one thousand bushels having been raised on one acre) and ease with which they can be grown. They need not be dug. Turn the hogs into the field, and they will help themselves by rooting. One acre will keep from

twenty to thirty hogs in condition from October until April; highly recommended for milch cows, increasing yield of milk and at the same time improving their condition. Plant ten bushels per acre.

Note—Tubers on hand from January to May. Postpaid, 10 lbs. \$1.00; F. O. B. Portland, 100 lbs. \$2.50.

COW OR THOUSAND HEAD KALE

Plants in Season

The great demand for this wonderful forage plant proves it to be the most valuable green feed for Pacific Coast dairy and stockmen; endorsed by Agricultural Colleges and Government Stations. Cow Kale should be grown in the same manner as cabbage. Make the rows 4 feet, plants 3 feet apart in the row. Can be set as late as July. Write for full information on Planting and Feeding.

A quarter of a pound of seed will produce enough Kale plants for one acre.

Postpaid, oz. 10c, $\frac{1}{4}$ lb. 30c, lb. 90c

BUCKWHEAT

Buckwheat is a valuable crop that can be easily grown wherever wheat will grow, producing a good yield even on light or poor soil and under favorable conditions is very profitable, being in big demand for milling—and is also the best "Bee pasture."

Sow 36 lbs. per acre in drills, 48 lbs. broadcast.

COMMON—Postpaid, 10 lbs. \$1.25. Write for prices in quantities.

SILVER HULL—Of a light gray color, rounder than the common; has a thin husk; matures earlier and yields heavily. An excellent milling variety.

Postpaid, 10 lbs. \$1.25. Write for prices in quantities.

JAPANESE—Ripens early—is hardy and yields the largest crops. The grains are extra large, dark brown, very thin hulled and makes the highest grade of flour.

Postpaid, 10 lbs. \$1.25. Write for prices in quantities.

*If you
Milk ^A
2 Cows
or more*

Sharples Suction Feed Separator

Will save your time and soon pay for itself

*We are factory agents for Sharples
Separators and Milking Machinery
Full information on request*

FLAX SEED

We have a splendid lot of selected re-cleaned Western-grown Flax, new crop, large plump seed. Per lb. postpaid, 30c. Write for prices.

Remember ALL PRICES ARE SUBJECT TO MARKET CHANGES. You will always get your money's worth or we will quote on request.

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG



BARLEY

BARLEY is a shallow feeder, the roots growing near the surface, and requires a rich, mellow soil. Barley responds readily to good tillage and any extra work with the disc and fine tooth harrow will be amply repaid. Do not try to grow upon poor, sandy or wornout soils, or where the ground is not in good condition or well drained. In rotation, Barley follows Corn, Peas, Potatoes, or any cultivated crop, and is the best nurse crop for starting clovers or mixed grasses. Should be planted late after ground is warm and Spring weather settled. Plant two bushels per acre. Crimson Clover planted in the Fall and plowed under after blooming in the Spring, leaves the soil in fine condition for barley.

NEW TREBI BARLEY

We consider ourselves fortunate in being able to offer our customers this wonderful new Barley. Many crops of Barley are ruined by early frost. The new Trebi ripens very early and there is much less danger of frost damage than with other varieties.

Our growers write us that the new Trebi Barley is the heaviest yielding variety that has ever come under their observation.

It has a very thin hull, a large plumb berry, is extra early, and we do not know of any better Barley to sow for feed purpose. Its very thin hull accounts for beards coming off easily when threshed, giving the grain a very fine appearance.

The seed stock we are offering is of the highest quality, well cleaned free from smut, etc.

Price: 10 lbs. postpaid, \$1.00. Write for quantity prices.

BLUE HULLESS BARLEY—Beardless

This new early Spring Barley originated at the Oregon Agricultural College and is recommended as one of the most satisfactory varieties for the Northwestern States, being a heavier yielder, with strong sturdy straw, it makes a satisfactory and profitable crop for grain and being beardless and of high feeding value is doubly valuable for hay. It makes a magnificent fodder which is very rich and almost equal to grain feed.

10 lbs. postpaid, \$1.00. Write for quantity prices.

BLACK HULLESS BARLEY—Bearded
Best of grains for feeding or fattening stock. Greater food value than corn.

Black Hulless Barley will grow on the dry Alkali soil where other grains fail. Sow in Fall or Spring as late as June 15, 75 to 100 lbs. per acre. Will yield as high as 75 bushels to the acre, weighing about 70 lbs. to the measured bushel; does not shatter or shell out easily.

When planted in the Fall its abnormal stooling habit and wide succulent leaves make it ideal for late Fall pasture yielding a full crop the next season. Stock prefer and thrive on it.

10 lbs. postpaid, \$1.00. Write for prices in quantities.

WHITE HULLESS OR BALD BARLEY

Beardless

An early Spring variety—beardless, of high feeding value, said to exceed corn as a pork producer. Can be fed to all live stock—especially valuable used in a mixed ration. Grain plump, heavy and when threshed is hulless like wheat. A heavy cropper. When grown and cut for hay it produces a magnificent fodder, which is very rich and almost equal to a grain feed. Culture same as Common Barley.

10 lbs. postpaid, \$1.00. Write for prices in quantities.

HANNCHEN BARLEY

Hannchen is the earliest and best of the 2-rowed barleys, is drought resistant and a sure and heavy cropper. The seed stock we offer was grown from seed secured from the Oregon Agricultural College. We call special attention to the plumpness of the seed, thinness of the hull and the ease with which the beards break off. It frequently happens that these beards drop in the field before harvest. Although a Spring Barley the United States Department of Agriculture has successfully grown Hannchen Barley from fall seeding where the winters are mild.

Price: 10 lbs. postpaid, \$1.00. Write for prices in quantities.

BEARDLESS BARLEY

Straw is about the height of the Common Barley, but better, and will stand up on any land; our seed crops have averaged 65 bushels per acre in dry unfavorable seasons. Sow as early as you can; frost does not hurt it. Many farmers will not grow Barley on account of the long, harsh beards which are so disagreeable in threshing although it is a profitable crop. This is as nearly beardless as seems possible to obtain, as beardless barleys show a tendency to produce a small percentage of bearded heads; it is about as easy to grow and handle as oats, and is the most Popular Barley grown.

10 lbs. postpaid, \$1.00. Write for prices in quantities.

COMMON BARLEY

We always aim to have a nice, clean stock of good Seed Barley on hand at all times. This is the common 6-row bearded type.

10 lbs. postpaid, 90c. Write for prices in quantity.

FIELD PEAS

Field Peas are a very profitable crop and are grown here very extensively. They can be grown alone or with oats. When planted with grain and cut green they make a large amount of very rich feed; also very valuable for enriching the soil if plowed under. **Write for prices.**

FIELD CORN



SIXTY-THREE PER CENT of the feeding value of a matured corn plant is in the ear. Corn to mature properly must be adapted to the section where grown, requiring several seasons of intelligent care and selection.

Our Western Grown Corn being thoroughly acclimated will give splendid satisfaction under the conditions and for the purposes recommended—we have large stocks and can supply any amount at very reasonable prices.

CULTURE—Thorough preparation of the soil is necessary for best results, methods of culture being determined by the different conditions of soil, climate, moisture and previous crops. The ideal soil is a deep warm one with a little sand, well drained and with sufficient humus to hold the moisture.

Deep plowing is always necessary for best results, and the heavy soils on the West side of the Cascades will give best results from Fall plowing, repeating in the Spring before seeding time. A liberal amount of stable manure and thorough tillage will help offset the cold nights. For best results when planted for grain, plant in hills 42 inches apart, allowing two stalks to the hill. For fodder or silo, three stalks, if the ground is rich.

For East of the Cascade Mountains—quoting “Farmer Smith”—“Where rainfall exceeds 12 inches and Corn is to follow Wheat, roll the stubble with corrugated roller right after harvest; then after first heavy rains, disc crossways of the rolling. If open weather, plow or disc thirty days later, allowing to lay in the rough until Spring. Ten loads of stable manure put on during the Winter or Fall will prove helpful. In the Spring when ground can be worked, disc and harrow every two weeks until May 1st, then plow deep, discing every day’s plowing and harrow, roll or clod-crush to a fine well-packed surface. List 6 inches deep in 42-inch rows, kernels 12 to 14 inches apart in the rows. If Lister is not available, plant at bottom of 6-inch furrow made with a stubble plow. Five days after planting, harrow with slanting spike tooth harrow, repeating every week until Corn is 4 to 6 inches high, then continue cultivating until in tassel.”



OREGON GROWN YELLOW DENT

By careful and continued selection this splendid corn has become acclimated and perfectly adapted to the short seasons of the Northwest and will mature fully every year if planted at a seasonable time. The table quoted from the New York Experiment Station report gives definitely the values of mature and immature corn, showing the loss when the crop is not ripened.

Oregon Grown Yellow Dent makes a quick growth with abundant foliage, maturing early and gives a good grain yield and will make silage of the highest food content. Especially adapted to the Willamette Valley and irrigated valleys of the Pacific Northwest. Price per lb. 20c, 10 lbs. \$1.25, postpaid.

Always remember that corn increases in food value and digestibility as it reaches the ripe stage—while other forage crops become more difficult of digestion and lose much of their food value as they ripen.

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS. PAGE TWO OF CATALOG



FIELD CORN—Continued

All sorts of field corn 10c per package; prices per 100 pounds on request
10 lb. prices on corn are postpaid



NORTHWESTERN DENT

This is a red corn with yellow dent or cap, and in high altitudes and the Northern sections where seasons are short will often mature a crop when other varieties fail. Owing to its frost and drought resistance, its extreme earliness and rapid growth make it valuable for late planting and for replanting. Ears are 7 to 10 inches, closely filled; grows 7 to 8 feet high. Splendid for silage.

1 lb. 20c, 10 lbs. \$1.25

HARTMAN YELLOW DENT CORN

"Hartman" is now considered a standard Dent Corn for grain west of the Cascade Mountains, and is also good for silo. Cob is small, ears medium to large, stalk light, allowing close planting.

1 lb. 20c, 10 lbs. \$1.25

MINNESOTA KING (DENT)

Smallest cob and largest grain. The ears are uniformly well filled out. Golden yellow, white capped and a good yielder, being a safe corn to plant west of the Cascades.

1 lb. 20c, 10 lbs. \$1.25

PRIDE OF THE NORTH YELLOW DENT

Pride of the North has long been the standard Corn recommended by the Agricultural Stations as the best Yellow Dent for Eastern Oregon, Washington and Idaho, and our seed has given splendid results whenever conditions have been at all favorable, maturing early and yielding heavily, the foliage being luxuriant and of medium height. "Pride of the North" is specially recommended for silo.

1 lb. 20c, 10 lbs. \$1.25

As an economic feed crop, Corn is without a peer. Twenty to thirty tons of silage per acre are within the reach of every corn grower who will plant good seed, fertilize wisely and cultivate diligently. Land that is producing three to four tons of hay will produce double this amount of feed planted to corn. Progressive farmers are realizing these facts and the corn acreage is increasing rapidly from year to year.



MINNESOTA No. 13 YELLOW DENT

The earliest of the early Yellow Dent corns and reported to be the heaviest yielding, producing splendid large ears, closely filled from end to end with bright yellow kernels. Has rather a thick cob and the shelled grains have a tendency to irregularity. "Minnesota No. 13" will average 7 feet high and being a rapid, vigorous grower, with heavy foliage, makes a fine fodder corn, and is especially recommended for ensilage west of the Mountains. Will mature in ninety days under favorable conditions.

1 lb. 20c, 10 lbs. \$1.25

EARLY CANADA (FLINT)

An eight-rowed Yellow Flint Corn; early and very productive.

1 lb. 25c, 10 lbs. \$2.00

CHAMPION WHITE PEARL

A large, White Dent variety; very popular with our dairymen on account of the great amount of green feed it makes.

1 lb. 20c, 10 lbs. \$1.25

WHITE FLINT

This valuable variety is specially adapted to Northwestern conditions. It is earlier than the well-known "Eight-Row Canada," and is to be preferred on account of its color, productiveness and very early ripening.

1 lb. 20c, 10 lbs. \$1.25

KING PHILIP

An early Red Flint Corn; well acclimated and well known.

1 lb. 20c, 10 lbs. \$1.25

WHITE RICE

Pop Corn. Best variety for popping corn. For Seed, per lb. 25c. For Popping, per lb. 15c

RAPE

DWARF ESSEX—One of the best forage plants, producing immense quantities of green feed when grass and other crops are dried up. Highly recommended by Professor Shaw and other eminent authorities. Has yielded ten tons of green forage per acre with a food value double that of green clover. Excellent pasture for all stock, and fine green feed for chickens. Thrives on all soils and is ready for use in six to eight weeks from time of sowing. Also valuable for plowing under. Sow same as turnips from May until September, or sow with grain. Use four pounds per acre in drills, eight pounds broadcast. Lb. 25c, postpaid. 10 lbs. \$1.55. Write for prices in quantities.

Sunflower

SUNFLOWER, MAMMOTH RUSSIAN—The largest and most productive variety. It is now being grown extensively for silage for cattle and is proving of immense value. The seed is a valuable poultry food and is a great egg producer. It is usually drilled in 36-inch rows with the hills 4 inches apart in the row. In sections where the season is short it should be planted as soon as the soil is in good condition in the Spring. For silage it should be cut when 25 to 30 per cent of the plants are in bloom. In food value it is equal to corn silage and the yield 3 to 4 times as great. It has been demonstrated in many parts of the country that no other known forage plant will produce as great a tonnage of high grade food for livestock.

Lb. 25c, 10 lbs. \$1.75, postpaid. Write for prices in quantities.

The Acme Automatic One-hand Corn Planter Puts the right number of kernels just where you want them and at the proper depth. Works equally well with right or left hand. See page 125.



CLOVER AND ALFALFA SEEDS

Write for prices on 100 lbs. or ton lots. They are always subject to market changes.
Single pound prices postpaid.

Alfalfa or Lucerne Clover

ALFALFA should be cut for hay when the shoots of the next crop appear at the base of the plants. The hay is especially valuable for dairy cows. As soon as cut it immediately commences to grow and during the hottest and driest weather, when other grasses are parched and withered, it remains fresh and green and grows as rapidly as ever. On the low lands it is not an unusual thing to harvest five or six crops of hay from the same field in one season without irrigation, and the same result is obtained on high, dry lands where irrigation is resorted to. It will not succeed on hard, clayey soils. Its roots, in seeking moisture, penetrate to incredible depths. The seed should be sown in the Spring, after danger from freezing the young plants is over, or in the Fall, early enough to give it a good stand before frost.

Many Alfalfas are widely advertised, such as Grimm, Baltic and the Peruvian varieties. The Grimm and Baltic are yet scarce, high in price, and reliable stock difficult to secure. The Peruvian has given good results in the South and is worthy of a good trial in this section. The domestic acclimated seed we offer can be depended upon to give splendid satisfaction.

Grimm Alfalfa

Grimm Alfalfa is the hardiest Alfalfa known. In trials, at practically every Experiment Station in the West and Northwest, it has headed the list for vigor and hardness.

Being scarce and in big demand the price is high but the value of Grimm has been demonstrated beyond question and we recommend its trial.

Price per lb. 70c, postpaid. Write for prices in quantities.

DRY LAND ALFALFA—Dry land Alfalfa will produce large, profitable crops of hay and excellent pasture on the high, dry lands of Eastern Oregon, Washington, Idaho and Utah and is especially recommended for the hills and plateaus where irrigation is impossible. It comes from the highest, driest alfalfa sections, and is very superior seed.

Per lb. postpaid, 45c. Write for prices in quantities.

ALFALFA—Our domestic Alfalfa is acclimated, and will thrive splendidly where growing conditions are normal, including irrigated land. Where dry farming is practiced special Dry Land Alfalfa is recommended.

Price: 1 lb. postpaid, 40c. Write for prices in quantities.

HAIRY PERUVIAN

Price: 1 lb. postpaid, 45c. Write for prices in quantities.

INOCULATE YOUR ALFALFA, CLOVERS, COW PEAS, SOY BEANS, VETCHES
AND ALL OTHER LEGUME CROPS WITH

Mulford Cultures

FOR LEGUMES

Small Cost

Large Returns

Easy to Use

No Labor Expense

Mulford Cultures are scientifically prepared and tested by experts, in the biological laboratories of H. K. Mulford Co., Philadelphia, U. S. A., with the same degree of care as Mulford Antitoxins, Serums, Vaccines, etc., which are standard all over the world.

Legumes offer the best-known means of maintaining soil fertility and rejuvenating over-cropped and worn out fields. They add both humus and nitrogen to your soil and thus increase your yield of wheat, corn and other non-legume crops.

The U. S. Department of Agriculture and many State Agricultural Experiment Stations recommend inoculation of legumes with nitro-fixing bacteria to induce a prompt "catch" and increase your yield.

Mulford Cultures are easily applied to the seed before planting and contain pure, tested strains of active, vigorous nitrogen-fixing bacteria, for inoculating seeds of legumes or soil. Enormous numbers of these very valuable and desirable bacteria are thus available to you in every package of Mulford Culture and may readily be applied to your seed. The sealed bottle insures purity.

PRICES:—Always specify on your order what crop you want to inoculate, as there is a different strain of bacteria for each legume.

ALFALFA, RED CLOVER, WHITE CLOVER, ALSIKE, VETCH, PEAS, BEANS, SWEETPEAS, $\frac{1}{4}$ acre 75c, 1 acre \$1.50, 5 acres \$5.00

LAWN GRASS

HARD OR CHEWING FESCUE (*Festuca duriuscula*)—This is a small, low growing grass, fine leaved, and forms a close turf which prevents the ingress of weeds. It is an absolutely permanent grass on all kinds of soils, even the lightest and dryest, and on dry, shingly soil it reigns alone. It is claimed that for lawns, golf links and such like it cannot be excelled if grown properly. Large quantities of this seed are imported annually, principally for golf links and lawns.

Per lb. 95c, 10 lbs. \$8.50, postpaid. Write for prices on larger lots.

See pages 46-48 for additional lawn grass.



CLOVERS

WHITE DUTCH CLOVER (*Trifolium repens*)—Superior for pasture and unsurpassed for the production of honey. It also makes a beautiful lawn when mixed with Blue Grass. Per lb. postpaid, fancy 80c, Diamond fancy 90c.

RED CLOVER (*Trifolium pratense*)—The standard Clover for all purposes. Hardy and succeeds well on any good soil. Makes superior hay—especially mixed with Timothy—either for dairy cows or for general use.

Per lb. postpaid, 45c. Write for prices in quantities.

CRIMSON OR SCARLET CLOVER (*Trifolium incarnatum*)—Highly recommended for pasture and fertilizing purposes. Is a thrifty annual, growing from 20 to 30 inches high. Germinates quickly, grows rapidly, and stools abundantly. Cut for hay when in full bloom. Planted in the Fall can be plowed under after blooming in the Spring and be followed with barley or potatoes. Per lb. postpaid, 40c. Write for prices in quantities.

ALSIKE OR SWEDISH CLOVER (*Trifolium hybridum*)—A perfectly hardy perennial. Excellent for hay and pasture. Valuable for bees. Resists both drought and excessive moisture. The hay is preferred to that of Red Clover, being finer, brighter and not so dusty. Per lb. postpaid, 40c. Write for prices in quantities.

MAMMOTH RED CLOVER—Grows very large and is used almost exclusively for plowing under for manure. Per lb. postpaid, 45c. Write for prices in quantities.

SWEET OR BOKHARA CLOVER (*Melilotus alba* (White Blossom)—In recent years has attracted quite a little attention as a hay crop and soil improver and support as a pasture crop. It does not produce seed the first year, but usually an abundant crop of seed and hay the second year. It is hardier than Alfalfa and more drouth-resistant and better for renovating the soil. Sweet Clover will thrive on most soils, either poor clay or sandy, but prefers a limestone soil. Where lime is deficient it should be added and good results will be obtained. Quite extensively grown on alkali soil. Sweet Clover is also recommended for bees. Per lb. postpaid, 40c. Write for prices in quantities.

HUBAM CLOVER (*Annual sweet clover*)—An annual white blossom sweet clover, very similar to *Melilotus alba*.

A rapid growing clover, ready for cutting four months after seeding. Makes an ideal crop for turning under or soiling in orchards. Bee men are finding it ideal for bee pasture, it being available the first season. Good stock pasture. Seed 4 lbs. per acre. Per lb. postpaid, \$1.00, 10 lbs. \$9.00. Write for prices on larger lots.

ESPARSETTE OR SAINTFOIN (*Onobrychis gativa*)—A deep rooting, perennial legume, extensively cultivated in dry, calcareous soils too barren for Clover or Alfalfa. Sow fifty pounds per acre. Prices on request.

DIAMOND GRASS SEED MIXTURES



DIAMOND QUALITY GRASS SEEDS are the choicest new crop seeds, re-cleaned and tested for purity and germination, and only those stocks that grade above the established standards are offered to our customers.

Our Special Mixtures have been carefully worked out by the tests and observations of practical experts familiar with the requirements and conditions to be met, and will give the best results possible to obtain for the uses to which they are recommended.

"DIAMOND" FANCY LAWN MIXTURE

TO have a good lawn the soil must be fine and rich, and well leveled. Then the best seed obtainable should be used. Plant any time from September until late Spring, depending upon the weather and soil conditions. Raking in the seed is advisable, and rolling greatly improves the turf. In watering your lawn soak it deeply and not too often, as light watering every day brings the roots close to the surface, where they quickly burn or dry out. You must not expect to make a fine lawn with cheap seed. The best lawn grass mixture costs more at first than the poorer substitute, but will be found much cheaper and more satisfactory in the end. Our "Diamond Quality" Fancy Mixed Grass Seed is prepared from the choicest re-cleaned Grass Seeds that have been carefully selected for their fineness and deep rooting, close growing habits and seasonable qualities, producing an ideal dense, velvety turf of lasting quality that remains green throughout the year. Sow one pound to 300 square feet, 15 to 18 pounds to a 50-foot lot.

Growing tests have proved our "Diamond Quality" Lawn Grass to be superior to any other mixture for our Western soils and climate; it is also free from chaff and foul seeds, weighing 23 pounds to the measured bushel. This is a guarantee of clean, plump seeds, as cheap chaff seed is very light.

Single pound postpaid, 65c. Write for prices in quantities.

FINE MIXED LAWN GRASS—For use where a temporary lawn must be quickly prepared, and if kept closely cut will be lasting and have a handsome appearance. A good, clean mixture. 1 lb. postpaid, 50c, 10 lbs. \$4.00

DIAMOND TENNIS COURT MIXTURE—For those who prefer a grass court, our Tennis Court Mixture will give the best results possible, as it is made up of fine, close-growing, heavily rooted grasses that make a dense and lasting turf. Single lb. postpaid, 70c. Write for prices in quantities.

"DIAMOND
QUALITY"

GRASS SEED—Continued

Grass Seed Prices subject to change without notice. See note top of page 41

SPECIAL PASTURE MIXTURES

No. 1. FOR GOOD LOAMY SOIL—A mixture of Grasses and Clovers, prepared especially for good, loamy soils, that will give satisfaction as a permanent pasture, or for mowing for mixed hay. For pasture, sow twenty pounds per acre.

Price postpaid, 45c per lb. By freight or express 10 lbs. 33c per lb. Write for prices in quantities.

No. 2. FOR IRRIGATED LANDS—Use grass pastures and avoid bloat from green Alfalfa—Sow twenty-eight pounds per acre, preferably in early Spring. As soon as well established give water as needed. With proper attention a permanent pasture can be maintained.

Price per lb. 45c, postpaid. Not prepaid, 10 lbs. 33c per lb. Write for prices in quantities.

No. 3. FOR LIGHT SANDY SOIL—An extra fine mixture for sandy or light soils. This will make a good, strong turf, that under ordinary circumstances should last for many years. Sow twenty pounds per acre.

Price, postpaid, 45c per lb. By freight or express 10 lbs. 33c per lb. Write for prices in quantities.

No. 4. FOR DRY LAND—Mixed especially for the regions between the Cascades and Rocky Mountains, and on good, common wheat land. Try this mixture, as we believe that it will give you best possible results. Sow twenty pounds per acre.

Price, postpaid, 50c per lb. By freight or express 10 lbs. 37c per lb. Write for prices in quantities.

STANDARD PASTURE MIXTURE—For general use; gives splendid satisfaction in the logged-off and burned-over lands of Western Oregon and Washington; is composed of standard Pasture and Hay grasses that thrive in this section; a good clean mixture, conforming to the standards of the pure seed laws.

MIXTURES FOR BURNED-OVER LAND—In grading and cleaning grasses and clovers, we frequently find combinations that are difficult of separation and while the seeds are often of excellent germination and quality, they cannot profitably be separated and cleaned, so we blend them to produce pasture mixtures suitable for sowing on burns and logged-off land, which at the price are splendid values and very economical for such purposes.

Price, 100 lbs. \$15.00

Price, 100 lbs. \$15.00

TIMOTHY—(*Phleum pratense*)—This is the most valuable of all grasses for hay. Thrives best on moist, loamy soil. Sow early in the Spring or Fall. Sow fifteen to twenty pounds per acre.

Fancy, lb. 25c, 10 lbs. \$1.75, postpaid.

ITALIAN RYE—(*Lolium italicum*)—A quick-growing grass, attaining a height of 2½ to 4 feet; very desirable for temporary meadows or pastures (will last from two to six years). Thrives best on soils that are slightly moist, and will even stand considerable overflow. Grows easily and bears an abundance of foliage that makes the best and sweetest hay imaginable. Sow forty pounds per acre.

Per lb. 30c, 10 lbs. \$2.25, postpaid.

No. 8. FOR ARID OR ALKALI LAND—Particularly for arid alkali lands. This mixture is composed of varieties that have proven to be the best for the soils mentioned. Sow twenty pounds per acre.

Price postpaid, 50c per lb. By freight or express, 10 lbs. 37c per lb. Write for prices in quantities.

No. 10. HAY AND PASTURE MIXTURE FOR DRY HILL LAND—Especially suited to the dry sections, such as parts of Southern Oregon, Eastern Oregon, Eastern Washington and Idaho. This mixture is made up of varieties that can endure a great change of temperature from heat to cold, and at the same time will make a splendid mixed hay.

Price postpaid, 45c per lb. By freight or express 10 lbs. 33c per lb. Write for prices in quantities.

No. 11. FOR GRAZING PURPOSES—This is a mixture of grasses only, being made up for the benefit of those who wish a mixture without Clover, and will make a fine permanent pasture, but is not intended for hay.

Price postpaid, 50c per lb. By freight or express 10 lbs. 37½c per lb. Write for prices in quantities.

No. 12. FOR BURNED-OVER BOTTOM LAND, OR LAND INCLINED TO BE RATHER DAMP—This is a mixture that will do well either for hay or for permanent pasture on land that is too wet for many of the grasses and clovers.

Price postpaid, 45c per lb. By freight or express 10 lbs. 30c per lb. Write for prices in quantities.

ENGLISH RYE GRASS—(*Lolium perenne*)—A strong-growing, hardy perennial grass, noted for its nutritive qualities. It is equally valuable for both grazing and hay. Forty pounds per acre. For Lawns this is used and recommended by many gardeners. If sown thickly, it makes a fine lawn, and for large grounds and parks it is very successful. Per lb. 30c, 10 lbs. \$2.25, postpaid.

MESQUITE—(*Holcus lanatus*)—It is usually sown on virgin soil without cultivation, after the ground has been burned over. Sow about thirty-five pounds to the acre chaff seed; hulled fifteen pounds per acre.

FANCY HULLED SEED per lb. 35c, postpaid.

A Clipper Grain Cleaner will improve your seed See page—



GRASS SEED—Continued

Grass Seed prices subject to change without notice. See page 41
Write for quantity prices.

KENTUCKY BLUE GRASS—(*Poa pratensis*)—One of the best grasses for permanent pasture furnishing a constant supply of the most nutritious feed during the greater part of the year. Sow twenty-eight pounds per acre. **For Lawns**—Blue Grass is used very extensively for lawns and is found in all lawn grass mixtures. Sow one pound to 300 square feet if used alone. 1 lb. 55c, postpaid.

ORCHARD GRASS—(*Dactylis glomerata*)—One of the most valuable of all the cultivated grasses, blooming with Red Clover, and making with it admirable hay. As a pasture grass it is more productive than any other, and does best under close feeding. Sow twenty-eight pounds per acre.

Fancy Eastern, per lb. 40c, 10 lbs. \$3.25, postpaid.

RED TOP—(*Agrostis Palustris*)—A good perennial grass. Generally sown for permanent pastures. Does best on moist or even marshy land. If the ground is not overflow land it is advisable to mix it with Meadow Fescue, Orchard Grass or Alsike Clover. Sow twenty-eight pounds per acre chaff seed; fourteen pounds hulled.

Choice Unhulled, 10 lbs. \$2.75, postpaid.

Diamond Fancy Hulled—A very superior grade of Red Top that is free from chaff and light seed. 10 lbs. \$3.25, postpaid.

CANADIAN BLUE GRASS—(*Poa compressa*)—Recommended in all pasture mixtures on dry soil; thrives well on clay or hard trodden and poor soil. Sow twenty-eight pounds per acre.

Per lb. 50c, postpaid

CHEAT SEED—(*Bromus secalinus*)—Cheat yields a good crop of hay, especially on low or moist soil and will stand considerable overflow without harm. It makes an excellent hay for cows or horses, but should be cut before it gets too ripe. Sow in the Fall or early Spring same as oats, and about 100 pounds per acre.

10 lbs. 75c, postpaid

BROMUS INERMIS—Russian Forage Grass—Awnless Brome Grass—This Bromus, on account of its strong perennial character, and its unusual drouth-resisting powers, is the best grass we have for the semi-arid regions of the Northwest. Grows luxuriantly, is freely eaten dry or green by cattle and yields from two to six tons to the acre. Sow twenty-five to thirty pounds per acre. Spring or Fall.

Per lb., postpaid, 35c; 10 lbs. \$2.25

RED OR CREEPING FESCUE—(*Festuca rubra*)—Forms a close turf and is valuable for lawn and golf mixtures; thrives in sandy soils and along the Coast. (Fourteen pounds to the bushel). Price per lb. 85c, 10 lbs. \$8.25, postpaid.

BERMUDA GRASS—(*Cynodon dactylon*)—Suitable only for climates where the Winters are not below the freezing point. It stands the hottest and driest season. Sow 6 lbs. per acre.

Per lb. 75c postpaid, 10 lbs. \$7.25

TALL MEADOW OAT GRASS—(*Arrhenatherum Elatius*)—Often attains a height of 3 to 4 feet by the middle of June. Makes splendid hay and thrives on sandy loam, but makes its best growth where there is some clay. Can be fed as a pasture grass, and will generally bear cutting three times. For mixing with Perennial Rye and Alfalfa for sandy soils it is excellent. Sow about thirty to forty pounds per acre alone or half that amount if mixed with the above varieties. Per lb. postpaid 55c.

MEADOW FESCUE—(*Festuca pratensis*)—Perennial; grows 3 to 4 feet high. Roots deep, thus resisting drouth. It succeeds on any ordinary soil; yields a heavy crop of superior hay; one of the best grasses for pastures, being valuable to mix with other kinds. Sown alone, use forty pounds per acre.

Per lb. 40c, postpaid

HARD OR CHEWING FESCUE—(*Festuca duriuscula*)—Fine, rather dwarf, justly noted for its drouth resisting qualities. Used very extensively in the east and foreign countries for Lawns, Parks, Golf Courses, Putting Greens or Fair Greens.

Per lb. 95c, postpaid

SWEET VERNAL—(*Anthoxanthum odoratum*)—Valuable to put in pasture mixtures and lawn grass on account of its earliness and its delightful fragrance when in bloom. Thrives under all growing conditions but is only recommended for use in mixtures. If alone use twenty-eight pounds per acre.

Annual, per lb. 45c, postpaid

TALL FESCUE—(*Festuca elatior*)—Succeeds best in moist alluvial and strong clayey soils; is very productive and lasting; valuable for permanent pasture, is relished by stock and on rich land makes fine hay—height 3 to 4 feet; weight twenty-two pounds per bushel.

Per lb. 70c, postpaid

ROUGH-STALKED MEADOW GRASS—(*Poa trivialis*)—A most valuable grass which flourishes in moist, rich soils. Roots are perennial, but soft; foliage freezes down.

Per lb. 85c, postpaid

Write for prices on larger lots

CRESTED DOG'S TAIL—(*Cynosurus cristatus*)—A perennial grass with short, narrow leaves; valuable for lawns or pastures on dry, light land; makes excellent sheep pasturage. Use 20 lbs. per acre if sown alone.

Per lb. 70c postpaid, 10 lbs. \$6.00

SHEEP'S FESCUE—(*Festuca ovina*)—Grows freely in high, dry and open pastures. Its chief merit is for sheep pasture. Thirty-five pounds to the acre.

Per lb. 85c postpaid, 10 lbs. \$7.50 postpaid

CAHOON SEEDER

SAVES SEED—SAVES TIME



THE NON-SACCHARINE SORGHUMS

Wonderfully productive and of great value as a forage, ensilage or grain crop in dry sections

THE varieties here offered represent the best selections and are highly recommended. They are best drilled in—using 3 to 8 lbs. per acre, depending on variety and condition. Plant in the late Spring after the ground is warm. Cultivate often, throwing earth toward the plants.

SUDAN GRASS—The great drouth resisting forage crop—All stock relish it, and no harmful effects have followed where it has been fed. Under favorable conditions, it grows from 7 to 9 feet, having luxuriant foliage and small stems. While thriving under dry conditions, excessive moisture will not harm it but is easily damaged by frost. Where growing conditions are favorable the stubble makes excellent green pasturage. In the South three or four cuttings are not uncommon. **Price: 1 lb. 30c, postpaid; 10 lbs. \$1.75.** Write for prices in quantities.

BROOM CORN—Dwarf Evergreen—Grows from 4 to 5 feet high and makes straw of finest quality, being almost, if not entirely, free from crooked brush. **Per lb., postpaid, 25c.** Write for prices in quantities.

MILO MAIZE—This is one of the sorghums similar to Kaffir Corn. Grows erect, with thick, close-jointed stalk. Height 4 to 7 feet. Heads are very large, giving a heavy grain yield: is drought resistant, and succeeds on alkali soil. Plant late when ground is warm, three to six pounds per acre.

Per lb., postpaid, 20c. Write for prices in quantities.

FETERITA—This is the most recent of the non-saccharine sorghums to command the attention of "dry farmers" on account of its wonderful yield and drouth resistant qualities, being twenty to forty days earlier than Kaffir corn, and has given immense crops in the driest seasons without having received a drop of rain. Makes splendid fodder as well as giving a good grain yield. Try Feterita. **Per lb., postpaid, 25c.** Write for prices in quantities.

MILLETS

Sown in April, May or June, 12 to 15 pounds for seed, or 20 to 30 pounds for hay per acre.

GERMAN OR GOLDEN—An improved variety, yielding a larger crop of seed than the Common Millet. It is also taller than the Common and yields a heavier crop of hay.

Postpaid, 10 lbs. \$1.25. Write for prices in quantities.

NEW SIBERIAN—New and wonderfully productive. Extremely hardy, and about two weeks earlier than the German Millet, growing four feet in height.

Postpaid, 10 lbs. \$1.25. Write for prices in quantities.

COMMON—A well-known variety growing from three to four feet high: has broad blades and strong stalks.

Postpaid, 10 lbs. \$1.25. Write for prices in quantities.

BROOM CORN MILLET—Is somewhat variable in character and is divided into several varieties, one of which is sometimes called Hog Millet, as the seed is often used to feed hogs. All of this class are better adapted to produce seed than for pasture.

Postpaid, 10 lbs. \$1.25. Write for prices in quantities.

WHITE WONDER MILLET—Grows four feet tall, bearing large heads covered profusely with bristles which repel attacks by birds. It does not stool freely but branches to some extent. The stems are strong enough to support the heavy heads. We recommend sowing this variety to be grown for grain for small chicks.

Postpaid, 10 lbs. \$1.25. Write for prices in quantities.

PEARL MILLET—Grows 8 to 10 feet tall, having heads 8 to 10 inches long prolific of seed that is hard and not eaten greedily by any kind of stock. When young the enormous growth of foliage is succulent but becomes coarse and objectionable and should be silaged before feeding.

We recommend this variety for green feed to cut when 2 or 3 feet tall. It is eaten greedily by all stock.

Postpaid, 10 lbs. \$1.25. Write for prices in quantities.



Millet

Lentils—French

The French Lentil excels as a food, is large, smooth, of a light even color and very attractive. It is also the heaviest yielding and most profitable variety to grow.

Lentils can be grown wherever peas or beans can be grown and are in big demand for export.

Lb. postpaid, 30c, 10 lbs. \$2.25



FARM AND FIELD SEEDS—Continued

Prices Subject to Change Without Notice. See Page 41
Ten Pound Prices Postpaid. Write for prices in quantities

Vetches or Tares



Vetches—Oregon's Greatest Forage Plant

PURPLE VETCH—(*Vicia atropurpurea*)—May be considered as a new vetch, it having been grown only to a limited extent, mainly in Oregon and California. It is a distinctly new variety and takes its name largely from the color of the blossom, which is a deep purple. It is being used by a great many orchardists for plowing under. It can be grown as cheaply as Common Vetch and should be planted in the fall on well drained fertile soil, sixty pounds to the acre. It may be used as a hay or silage crop. The plant has been found to be free from attacks of the aphid.

10 lbs., postpaid, \$2.50. Write for prices in quantities.

Large buyers write for quotations as the market is constantly changing.

COMMON VETCH—(*Vicia sativa*)—One of the best forage plants that can be grown on the Pacific Coast. Often called Fall Vetches. It furnishes an abundance of excellent feed, either green or cut and cured for hay. The seed should be mixed with an equal weight of some variety of wheat, oats or rye having a stiff straw, and the mixture sown at the rate of two bushels per acre. Vetches weigh seventy pounds per bushel. Sow in the Fall or early Spring.

10 lbs., postpaid, \$1.25. Write for prices in quantities.

WHITE SPRING OR PEARL VETCH—White Pearl Vetch is coming into great favor and is being extensively used for Spring planting as splendid results can be had from sowings made as late as April. The yield being fully equal in every way to that obtainable from common vetch (*vicia sativa*) and of fully as great feeding value.

The advantage of later Spring planting makes White Pearl Vetch specially desirable and more sure to give returns than common Vetch under many planting conditions, and it has given better results on the light sandy cut-over lands of Washington and Idaho.

10 lbs., postpaid, \$2.25. Write for prices in quantities.

SAND, or Winter Vetches—(*Vicia villosa*)—This variety thrives on poor, arid, sandy soils. It is sown either in the Fall or early Spring, and is generally mixed with rye, which serves to support the plants. It grows to a height of 3 or 4 feet, and can be cut twice; first, as soon as the bloom appears, and afterward for seed. The plant is perfectly hardy and makes a very nutritious food. 10 lbs. postpaid, \$3.25. Write for prices in quantities.

WOOLLY-PODDER VETCH—(*Vicia dasy-carpa*)—Closely related to hairy vetch, equally hardy, two to three weeks earlier. It differs from Hairy Vetch, having nearly smooth leaves, purple flowers and hairy pods. It has succeeded splendidly wherever tested, and on account of its earliness has advantages over hairy vetch. Excellent crops are produced in Western Oregon. Recommended in this section for fall planting. It is worthy of a trial. 10 lbs. postpaid \$1.75 Write for prices.

SPECIAL MIXTURES for BURNS, DRY or WET LANDS—Temporary or Permanent Plantings for Hay or Pasture—WRITE US.



THE production of fine seed oats has always been one of our leading specialties and we consider them to be the most profitable and satisfactory grain crop, being indispensable to stock and dairymen, and their use as a food is constantly increasing.

Planted in season, oats rarely fail, are easily and cheaply grown, and the valuable new varieties which we offer will double the number of bushels per acre that you would get from common seed oats, which means half the cost of production, or twice the profit.

They will mature in July from Spring sowing, giving quick returns and leaving the soil in good condition for Fall planting.

We offer select, re-cleaned, well-matured seed oats of standard varieties, suitable for this section and our own introductions, "ECLIPSE," "CLIMAX" and "TRIUMPH," the earliest and most vigorous, heaviest yielding oats ever grown anywhere.

DIAMOND HULLESS OATS

Many Varieties of Hulless Oats have been tried by the Department of Agriculture, but very few yield well enough to pay the grower.

HULLESS OATS grow like ordinary oats with a branching head but thresh out clean, the grain being larger than the kernel of common oats and ready for rolling or milling just as they come from the cleaner, retaining all of their richness and flavor. You can make your own oatmeal on any gristmill and it will also cook quicker than other oatmeals and you will find it of superior excellence.


DIAMOND HULLESS OATS stool freely, stand up well and will thrive wherever oats can be grown. They are drouth resistant and ripen in about 100 days from seeding and have given 50 bushels per acre, weighing about 54 pounds to the measured bushel. Sow at the rate of 40 to 50 pounds to the acre.

10 lbs. postpaid, \$1.50. Write for prices in quantities.

"**SENATOR**"—(A New Garton Side Oat)
—Senator is highly recommended by the originators for its extreme earliness and great fertility—and is **especially adapted to heavy land**. Seeded on good land this oat will do well, and where oats are liable to lodge **SENATOR** will stand up—has stiff straw—large grains and fine color. 10 lbs. postpaid, \$1.00.

For exhibitions the large grains and big heads of **SENATOR** make a fine showing. By freight or express. Write for prices.

WHICH IS YOUR CHOICE?

The difference in the cost of planting and harvesting an acre of common oats yielding 20 to 50 bushels, and of growing our record-breaking varieties that give from 80 to 135 bushels per acre is only the difference in cost of the seed (from 50c to \$1.00 per acre); in other words, *it costs about as much to plant, care for and harvest oats that yield only half a crop as it does to reap a real harvest.*  **THINK THIS OVER**



"CLIMAX" always a winner

OATS ARE A PROFITABLE CROP, easily grown and seldom fail. Prices are high and indications are that they will remain high for some time. Their value as a food makes them in big demand and our select seed will yield you a profitable crop.

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG



ECLIPSE—White Side Oat

"ECLIPSE"—*Side Oat*—is a reselection from our famous "Shadeland Challenge," and is living up to its name by "eclipsing" all competitors, including the parent stock, being equally as vigorous and early and the massive heads are uniformly larger and filled with plump, heavy thin-hulled oats of finest milling quality.

The yield on light dry soil where our seed crops are grown runs from 75 to 85 bushels per acre and moist bottom land 125 bushels per acre is not uncommon.

"ECLIPSE" can be planted Fall or Spring, west of the mountains (Fall plantings should be made on well-drained soil), but in severe climates early Spring planting is best. Matures in 90 to 100 days, and can always be harvested before the Fall rains. Their beautiful bright color and plumpness command the top price in the market. Try this grand new side oat.

10 lbs. postpaid, \$1.00. Write for prices in quantities.

CLIMAX—Tree Oat

"CLIMAX"—*Tree Oat*—For early Spring planting where seasons are short, in high, dry altitudes, and where quick growth and early maturity are demanded, "CLIMAX" will give you a bountiful harvest of the finest oats you ever saw. The white grains are uniformly large, plump and full with a very thin hull and are often borne 3 in a spikelet, which partly accounts for its wonderful yield.

In our trials "CLIMAX" has not been injured by severe early freezing and later drought, but has stood up, green and vigorous, yielding one hundred bushels per acre on hill land when oat crops throughout the same section were stunted and dried up.

If you live West of the Cascade Mountains you can plant "CLIMAX" Fall or Spring, any time the ground is fit, but where the climate is severe, Spring plantings are best.

10 lbs. postpaid, \$1.00.

Write for prices in quantities.

Triumph Oats

A new Side Oat with great merit. For the years that we have been handling Seed Oats we have always been most careful to handle only the highest grades and it is a

great pleasure to be able to offer our patrons this wonderful new variety SHADELAND TRIUMPH. The introducer and grower, C. D.

Nairn, has the following to say about this, his new pet:—

"This is a new Oat offered for the first time, a Side Oat with the longest heads of any I have yet seen and one of the earliest—fully ahead of Shadeland Senator. All varieties were seeded in my trial ground on March 10th, last Spring, and Triumph was harvested on July 25th and Senator on the 28th.

10 lbs. postpaid, \$1.00. Write for prices in quantities.

STANDARD SEED OATS

Choice Recleaned Stock of the following varieties can always be supplied.

WHITE SEED OATS—We always try to have a selected recleaned stock of No. 1 White Seed Oats which we can supply at market prices. Write for samples and prices on the quantity you require, or send in your order. You will always get full value for money sent.

Write for prices.

SWEDISH RED—A comparatively new tree Oat from Sweden having a soft hull and fine soft straw which is ideal for hay. This is the Oat grown so extensively in Northern California and along the Southern Oregon Coast. Sow in Fall or Winter. Red Oats always bring a good price in the market.

Write for prices.

GRAY WINTER—This Oat is planted extensively throughout the Northwest as a Fall or Winter Oat. Is well and favorably known, being a good yielder, and the Oats are large and plump.



Seed Wheat

A Seed Field of Early Baart that Passed Inspection for Certification Under the Supervision of the Oregon Agricultural College

PRIOR to the adoption of the U. S. Grain Standards the Pacific Northwest did not use the grades established by the big eastern wheat centers, but since the U. S. Standards have become effective it is impossible to market mixed varieties of wheat or other grains at the best prices, and growers will find it necessary and profitable to plant only clean, pure seeds of standard commercial varieties.

We have provided splendid stocks of the best sorts for this section and when ready to buy any variety of Seed Wheat, write us for quotations on quantity wanted or send in your order and we will give full value at lowest seed prices. The following are standard market varieties that are known as the most profitable and best yielding.



Price, 10 lbs. postpaid, \$1.00. Write for quantity prices.

EARLY BAART—*Bearded—Spring*

This splendid new Spring wheat is fully as early as Marquis, a better yielder and has a large white grain of finest milling quality. In the big wheat sections of Eastern Washington, Early Baart has matured three weeks ahead of Blue Stem, giving a bigger crop and its earliness insures protection against loss from the extreme heat and drouth occurring later. We offer a fine stock of certified seed from the field illustrated above.

BLUE STEM—*Spring*

The best known and one of the most profitable Spring varieties for the Northwest. Heads are large and well-filled, stools freely. Grain very hard. Although a Spring variety, can be planted as a Fall Wheat in sections where Winters are mild. The Blue Stem of the Pacific Coast has a white grain and smooth chaff, quite unlike the Velvet Chaff and Red grains of the states East of the Rockies. Better results are had with this Wheat East of the Cascade Mountains, as it has a tendency to lodge in the moist sections on the Coast.

WHITE WINTER WHEAT

Soft, white Winter Wheat. Beardless with white chaff. Kernels short and plump. A good milling wheat suited to well drained lands West of the Cascade Mountains. Often confused with Rink Wheat, but grain and head are both larger and has yielded more under same conditions.

RINK—*Winter*

Similar to White Winter and often mistaken for it, but having a little shorter kernel and head. Yields well and has proven profitable on the well-drained rolling lands of the Willamette Valley.

MARQUIS—*Spring*

Marquis Wheat was produced by a cross of Red Fife and Hard Calcutta. It differs from the parent stock, Red Fife, inasmuch as it has a heavier head, shorter straw, and the grain is a little darker, more flinty and very heavy, weighing about 65 pounds to the measured bushel. Heads are beardless, chaff smooth.

Marquis was awarded the prize at the New York Agricultural Show, as the best wheat grown on the continents of North or South America. It is early, heavy yielding and of splendid milling and baking quality.

LITTLE CLUB—*Spring*

This well-known variety has stiff straw, typical club head and does not shatter easily. Is a good grower and yields well. Our stock is exceptionally good, being selected from a heavy yielding strain.

FOISE—*Winter*

Medium hard kernels. Beardless, chaff red. Heads slightly club shaped at tip. Specially adapted to the richer soils and prairie lands of the valleys, and foothills West of the Cascades and under favorable conditions yields heavily. Mills well.

TURKEY RED—*Winter*

A medium hard red bearded variety; a heavy yielder and does not shatter out easily. Is very hardy, doing well in cold climates, but in moist sections has a tendency to lodge badly. The grain is hard and of good quality. A good Wheat for the dry sections East of the Cascades.

SEED WHEAT—Continued



Seed Fields of Blue Stem and Marquis

FORTY FOLD—Winter

Forty Fold is referred to as "Gold Coin" in some sections. Is quite early, seed resembling Blue Stem. A favorite Winter variety in many localities, and in good demand for milling.

Write for Prices

RED RUSSIAN—Winter

This is extensively grown in the Palouse country of Eastern Washington, where conditions are favorable. It grows vigorously, maturing late, and gives a heavy yield of both grain and foliage. It is a superior variety for choking out weeds, growing close and luxuriantly.

CORONA COPPERCARB

IMPORTANT changes have been made in the treatment of seed grains for the control of bunt, stinking smut, etc. The new way consists of dusting the grain with copper carbonate. It will supplant the commonly known and very distasteful formaldehyde method because the copper dust gives successful results in the control of the diseases, but does not in the slightest degree hurt germination, and at the same time relieves the farmer of a most irksome task.

Treating the grain with Corona Coppercarb can be carried out by a shoveling over process, but an ordinary barrel churn is better. If such an outfit is rotated slowly a very satisfactory distribution of the dust will be made over all the surface of the grain. These churns come in all sizes and will meet the needs of most all farmers. The operation is very simple and does not require much time. One churn will dust a large quantity of seed.

This simple dusting method with Corona Coppercarb, or even with a concentrate, means a lot to the farmer who is riding the drill from daylight to dark and has been obliged in the past to treat the grain sometime during the late evening or perhaps at night. It will eliminate forever the tedious (almost man-killing) effort of the sloppy formaldehyde process.

USE 2-4 OUNCES PER BUSHEL OF SEED

Price, 25 lb. cans only \$5.50

SEED RYE

Spring Rye is a very important and profitable crop useful for replacing winter grain that has failed, or planted as a soiling or grain crop is always dependable. Should be sown at the same time as other Spring grains using 90 to 120 lbs. per acre.

BEARDLESS SPRING RYE—This splendid variety is extremely hardy, yields heavily and is preferred for stock feeding, as the small fine beards (about an inch long) mostly drop off in handling. **Plant Fall or Spring.**

10 lbs. postpaid, 90c

SPRING RYE—Bearded—We offer a fine stock of true Spring Rye that can be planted in this section any time after the ground can be worked. **10 lbs. postpaid, 90c.** Write for prices in larger lots.

ROSEN RYE—A fall or winter rye brought from Russia in 1909. Each head fills four complete rows of grain. The grains are much larger than of common rye and the yield double and some make it stronger and say three for one. You cannot make a mistake in trying it.

10 lbs., postpaid, \$1.00. Write for prices in quantities.

SPELT or Emmer

EMMER — (*Triticum Diococcum*) — Often Mistakenly Listed as Speltz—Similar to barley in growth, but produces two grains in a spikelet. A comparatively new and profitable crop yielding 50 to 100 bushels of grain, or four to six tons good hay per acre. Thrives well on poor soil, and dry weather seems not to affect it. After threshing, the straw makes good feed. Sow in Spring at rate of 75 to 100 pounds per acre. We offer choice, re-cleaned seed.

10 lbs. 75c, postpaid

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG



“DIAMOND QUALITY” FLOWER SEEDS

FLOWERING plants are enjoyed by everyone, and cut flowers for home use or flowering plants for garden display can easily be grown; their care is a pleasant and healthful diversion and for the small expense of time and money nothing will return so much pleasure and profit. If you have any planting problems, if you wish to produce special effects or work out color schemes, write us; we will be glad to assist you in every way possible, and our experience is at your service.

CULTURE—Cultural directions are printed on the back of nearly all packets. Flowers usually succeed best in a sandy loam, made rich with well-rotted manure, which should be made fine and thoroughly mixed with the soil. A soil thus prepared will remain moist and loose, so that flower seeds, which are generally small and delicate, will germinate and grow with vigor.

After the plants are up they require plenty of air and moisture, but they must not be too wet or they will “damp off.” When large enough to transplant, put them in boxes or pots, giving them plenty of room, then when the ground is warm enough to put them outside, each plant will have a nice clump of roots. But if they are left inside and are close together, they will be weak and will not thrive.

A common mistake with flower, as well as other seeds, is planting too deep. A good rule is to plant the same depth as the thickness of the seed, and always press the soil down firmly, as this helps the seed to secure a firm hold and also retains the moisture.

A hotbed or cold frame is very convenient to start seeds in, as the temperature and moisture can be so regulated as to make their germination and rapid growth more certain. Most seeds do well if sown in boxes in a sunny window in the house.

Plants are usually ready to be transplanted when they have made a growth of two inches.

INFORMATION THAT WILL AID IN SELECTION OF FLOWERS

Annuals bloom and ripen the first year and then they perish. Many annuals in warm climates, or when taken in, or protected during Winter, become perennial, with short lives.

Hardy Annuals, Biennials and Perennials can be sown in open ground early in the Spring if desired, and Hardy Biennials and Perennials do not require any protection in Winter.

Perennials flower several years in succession.

Biennials do not generally flower the first year, and are in their perfection the second year.

Half-Hardy Annuals, Biennials and Perennials should not be sown in open ground until settled warm weather, though they can be sown in the house, if desired, early, and afterwards transplanted. The two latter need to be protected in Winter, or carried over until Spring in cold frames or greenhouses.

Flower Seeds that are easy to grow under the proper conditions of heat and moisture will often fail when these conditions cannot be controlled.

The following seeds require special attention and equipment for best results:

Asparagus Plumosus	Calceolaria	Cyclamen
Asparagus Sprengerii	Canna	Heliotrope
Begonia	Cineraria	Gentiana
Smilax and Primroses except Evening Primrose, Oenothera		

"DIAMOND QUALITY" SWEET PEAS

Sweet Peas Head the list as our most beautiful and popular annual

OUR Famous "Diamond Quality" Sweet Peas are selected with critical care and we offer the best productions of the foremost growers. Although we list only those we consider best, we can supply any variety in commerce, and special orders will receive careful attention.

CULTURE—First and most important, plant as early in the Spring as the conditions will permit. Seeds should be sown at the rate of one ounce to 15 feet. Make a trench about 3 to 4 inches deep, planting the seeds in the bottom about 2 inches deep, pressing the soil down firmly. After the plants are well up, thin to 4 or 5 inches apart, and draw the soil around them until the trench is filled above the level. This gives a depth to the roots, preserving the moisture. Keep the ground well worked and water if needed, an occasional thorough soaking being better than a daily sprinkling. Keep the flowers cut close and a pruning of the tips of the vines will also aid in prolonging the season of bloom and insuring better flowers.

EARLY FLOWERING SPENCER SWEET PEAS

Six weeks earlier than the Spencers, these new early-flowering varieties begin to bloom 106 days from planting in the open ground and flower through a long season—about four months. **Pkt. 15c, 9 for \$1.25**

AVIATOR—Dazzling crimson scarlet.

Oz. \$1.50

BLUE BIRD—Magnificent violet blue. Profuse and continuous bloomer.

Oz. \$1.00

CANARY BIRD—Splendid cream or primrose colored self. Flowers of great size and beautifully waved.

Oz. 75c

COLUMBIA—Without doubt the best and most productive pink and white. (Early Blanch Ferry.)

Oz. \$1.25

GLITTERS—A strong and vigorous grower. Profuse and continuous bloomer. Standard bright fiery orange, wings deep orange.

Oz. \$2.00

HARMONY—A splendid variety, rich true deep lavender throughout. Flowers of large size, beautifully waved

Oz. \$1.50



*Mulford
Cultures
for Sweet Peas*

*Makes larger
Flowers and
prolongs the
blooming period*

HELEN LEWIS—Orange salmon.

Oz. 75c

HERCULES—Giant pink.

Oz. 75c

IMPROVED SNOWSTORM—A vigorous grower, the immense flowers are invariably borne in fours on very long stems.

Oz. \$1.00

MAROON PRINCE—Deep rich, glowing reddish maroon, really a unique color. Flowers beautifully waved and of large size. A strong grower and profuse bloomer.

Oz. \$1.00

ROSE QUEEN—Pleasing shade of fine rose pink. Flowers borne on long strong stems, of great size and much waved.

Oz. \$1.25

YARRAWA—The flowers average two and one-half inches in diameter; many are duplex or double. The color is a bright rose-pink with a clear, creamy base.

Oz. \$1.00

SWEET PEAS

Standard Spencer Varieties

A splendid collection, including the best of the recent novelties.

THE NEW "SPENCER" type has lovely waved fluted flowers of gigantic size, and in exquisite colorings, length of stem, and lasting qualities are much superior to the older types.

ORANGE AND SALMON

BARBARA—A beautiful shade of orange salmon, the brilliancy and delicacy of the coloring being enhanced by planting in partial shade. A true Spencer of lovely form, very valuable as a cut flower. **Pkt. 10c, oz. 60c**

ILLUMINATOR—A brilliant orange-salmon ground illuminated with bright cerise pink; a rare and wonderful color combination of great beauty. First class certificate. **Pkt. 10c, oz. 50c**

THOMAS STEVENSON—The most brilliant orange scarlet, standard of deeper color than the wings. The flowers are of the finest Spencer form. **Pkt. 10c, oz. 65c**

ROBERT SYDENHAM—A glowing orange salmon; a strong grower, producing four flowers to a stem. It is undoubtedly the best and largest of this shade of color. **Pkt. 10c, oz. 65c**

RED AND MAROON

FIERY CROSS—The standard is a scorching fire-red or rich orange-scarlet, which scintillates and glitters in the bright sunlight with a glowing, fire-like sheen that radiates over the entire flower, including the rich, cherry-orange wings. **Pkt. 10c, oz. 65c**

KING EDWARD—Bright crimson scarlet, largest size, wavy standard; drooping wings, long stems; one of the finest reds. **Pkt. 10c, oz. 50c**

KING MANOEL—Large full, wavy blossoms of dark brilliant maroon. A bold and attractive flower of great beauty. **Pkt. 10c, oz. 50c**

ROYAL SCOTT—A magnificent new red that does not burn. The color is glowing orange-scarlet. Flowers large and handsome. **Pkt. 25c, oz. \$2.00**

THE PRESIDENT—Brilliant orange-scarlet. Flowers of large size. Usually blooms in fours on strong stiff stems. **Pkt. 10c, oz. 75c**

VERMILLION BRILLIANT—An intense pure scarlet self-color of rare beauty and substance. Absolutely sun-proof. A stocky, vigorous grower, profuse bloomer, the long, strong stems carry four perfect flowers. **Pkt. 10c, oz. 50c**

VARIEGATED

SENATOR—A combination of deep claret and chocolate, striped and flaked on a light heliotrope ground. The coloring, though dark, is brilliant and attractive. **Pkt. 10c, oz. 50c**

LAVENDER AND BLUE

ASTA OHN—Lavender, suffused with mauve; of perfect form, largest size, 4 blossoms on long, strong stems; very vigorous. **Pkt. 10c, oz. 50c**

BLUE MONARCH—Splendid new dark blue, self colored, of large size and good substance. **Pkt. 10c, oz. 75c**

FLORENCE NIGHTINGALE—Immense, bold erect flowers of soft, rich lavender with very delicate suffusion of rose; a beautiful, self-colored flower, frilled and waved. Bears four blooms on extra long stems. **Pkt. 10c, oz. 50c**

HAWLARK LAVENDER—There is nothing quite so fine in lavenders as this splendid novelty. The flowers are of the largest size. Easily the best of its class. **Pkt. 25c, oz. \$2.00**

MRS. TOM JONES—Best described as a bright delphinium blue. Easily the finest and most perfect blue sweet pea to date. **Pkt. 20c, oz. \$1.50**

ORCHID—Of extra large size. One of the best lavender selfs. **Pkt. 10c, oz. 75c**

ROYAL PURPLE—A rare new shade in Sweet Peas, rich purple, almost true royal, a color that does not exist in *Grandiflora* type. **Pkt. 10c, oz. 50c**

WEDGEWOOD—A true self—being a beautiful Wedgewood blue; is larger, more vigorous, blooms more freely and is entirely free from purple shading. **Pkt. 10c, oz. 50c**

WHITE

CONSTANCE HINTON—Decidedly the best black-seeded, white-flowered variety. Flowers are of largest size, and come at times with a decided blush tinge. **Pkt. 10c, oz. 50c**

ETTA DYKE—One of the finest white waved variety. **Pkt. 10c, oz. 50c**

KING WHITE—The newest and most magnificent white; of perfect Spencer type; the immense petals gracefully frilled—are a pure white of wonderful substance. **Pkt. 10c, oz. 50c**

WHITE SPENCER—A pure white flower of enormous size beautifully crinkled and fluted, of splendid substance. **Pkt. 10c, oz. 50c**



SPENCER SWEET PEAS—*Continued*

PINK AND CREAM

COUNTESS SPENCER—*Pink*—The first Sweet Pea of the Spencer type. Flowers extremely large, beautifully expanded, crumpled and waved. Color silvery white, suffused and tinged with soft shell pink, deeper at the outer edges. **Pkt. 10c, oz. 50c**

DOBBIES CREAM—A good primrose, a strong grower and generally four flowers on a stem. **Pkt. 10c, oz. 65c**

LA FRANCE—Delicate light shrimp pink color. Flowers large and well formed. A most pleasing variety. **Pkt. 20c, oz. \$1.75**

Mulford Cultures FOR
FOR BEGINNERS SWEET PEAS
MAKES LARGER AND BETTER FLOWERS

"MARGARET ATLEE"—The most perfect of the Duplex type yet produced. Color is a warm salmon pink suffused over a cream ground. The cream deepens into a bright buff at base of standard and wings. Flowers are of very large size and are borne almost uniformly four on a stem. **Pkt. 10c, oz. 50c**

PRIMROSE SPENCER—Color, a true primrose. Very vigorous, free flowering, excels in beauty of form, length of stem and keeping qualities. **Pkt. 10c, oz. 50c**

MRS. HUGH DICKSON—One of the most attractive and pleasing varieties. The flowers are very large and are elegantly carried, usually four together on a long, strong stem. The coloring is apricot on a cream ground, shading off rather lighter toward the center of the flower. **Pkt. 10c, oz. 60c**

A COLLECTION OF NEW NOVELTIES

Offered by us this season for the first time
4 Pkts. for 75c

1 HAWLMARK	} For Description See Page 57
1 LA FRANCE	
1 MRS. TOM JONES	
1 ROYAL SCOTT	

Standard Spencer Sweet Peas

Six 10-cent Packets for 50 cents

Your Selection of the Color.

Twelve 10-cent Packets for \$1.00

Your Selection

Collection of Early-Flowering

Eight 15-cent Packets for \$1.00

Your Selection of Colors.

For Classified List of FLOWERS

Giving COLOR, HABIT and Blooming

Period of the Flowers we list. See Page 72

Remember—Early plantings make finest flowers and more of them—they also have longer stems and bloom throughout a longer season

To produce a luxuriant dark green velvety lawn, sow **DIAMOND FANCY MIXED LAWN GRASS** and fertilize with **DIAMOND LAWN** and **ROSE FERTILIZER**

DIAMOND PLANT FOOD

For Ferns, Palms and House Plants. Clean, Odorless, Highly Concentrated

Produces Luxuriant Foliage—Brilliant and Lasting Flowers. A 40-cent package will feed a dozen large house plants a whole year. Price, ½ lb. pkg. 25c—postpaid 35c; 1 lb. pkg. 40c—postpaid 50c.

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS. PAGE TWO OF CATALOG

SWEET PEAS IN MIXTURE

SUPERB SPENCERS

SUPERB MIXTURE—True Spencers Only—A splendid mixture, carefully proportioned and blended to produce pleasing and harmonious combinations of color. These are not seedlings, but carefully selected named varieties that retain all their purity and brilliance of color.

Pkt. 10c, oz. 30c, ¼ lb. \$1.00, 1b. \$3.00

DIAMOND

DIAMOND MIXTURE—The most perfect blend of the finest named varieties it is possible to produce. This mixture contains many famous novelties the best of Grandifloras, also standard Spencer types, and will delight the most critical. Sold in 1 oz. sealed pkts. only at 15c each

GRANDIFLORA

These old-time favorites. Our mixture is made up of select named varieties.

Pkt. 10c, oz. 20c, ¼ lb. 50c

CHRISTMAS FLORING

GRANDIFLORA TYPE—Pink Lavender and White. **Pkt. 10c, oz. 25c**



ANNUAL FLOWER SEEDS

And Those Generally Used as Such

CHARMING effects for every planting purpose can be had at very little expense by the proper planting of Annual Flowers, Vines and Foliage Plant. For classified list showing what is best for various purposes, see page 72.

Annals bloom the first year, and many of our most popular flowers come in this class—under favorable conditions a few varieties will continue to live longer than one season, but as a rule they perish, and in planting for permanent effects the perennial plants are generally selected, the annuals being used for the first one or two seasons until the perennials become established.

ASTERS

Asters grow to perfection in our mild, cool climate and splendid strains of the best-known sorts have been developed by careful selection. As Fall bloomers for garden or cut flowers, asters are most satisfactory, and the varieties we offer can be depended on for best results, rivaling the chrysanthemum in size and beauty. Asters require a rich, moist soil. Seed should be sown inside in March, and plants transplanted to the open ground when the weather is settled.

"CREGO GIANT" ASTER—The "Giant Crego" is distinct in every way, and its magnificent flowers, often 6 inches in diameter, have rare beauty of form and brilliant coloring, are very vigorous and free flowering.

White, Shell-Pink, Rose, Purple, Lavender and Mixed. Pkt. 15c, $\frac{1}{8}$ oz. 50c

PACIFIC BEAUTY—A rich true lavender, with big fluffy blooms on strong stems; free bloomer and great keeping qualities.

Pkt. 10c

ASTER-MUM—A selection from "Giant Comet." Of immense size, resembling chrysanthemums in form, hence the name "Aster-mum." Plants are about two feet high with good stems. A little earlier than "Crego." Three colors. White, Rose-pink, Lavender, Purple and mixed. Pkt. 10c, $\frac{1}{8}$ oz. 50c.

QUEEN OF THE MARKET—Best early Aster, of graceful spreading habit.

Light Pink, White, Dark Blue, Light Blue, Mixed. Pkt. 10c, $\frac{1}{8}$ oz. 75c

"MIKADO" OR ROCHESTER—A favorite with florists. Has very long, narrow petals, toward the center they cross and recross in splendid confusion, strong branching habit. White, Rose, Pink, Lavender and mixed.

Pkt. 10c, $\frac{1}{8}$ oz. 50c

LATE BRANCHING—Flowers large, beautiful, double and borne on long stems. White, Rose, Shell-Pink, Lavender, Purple, Mixed.

Pkt. 10c, $\frac{1}{8}$ oz. 75c

GIANT COMET—Flowers large and beautiful; petals long and twisted.

Rose, Crimson, Dark Blue, Light Blue, White, Mixed. Pkt. 10c, $\frac{1}{8}$ oz. 50c

BEAUTY ASTERS

A recently developed late flowering strain, which begins to flower in early September, lasting until destroyed by frost. Large flowers borne on long, stout stems from 18 to 24 inches. Plants grow nearly three feet in height.

American Beauty. A bright crimson-rose.

Lavender Beauty. A soft lavender.

White Beauty. A good white.

Purple Beauty. A deep, rich purple.

September Beauty. A delicate shell-pink.

Packet 15c, 5 Packets for 60c

NEW CALIFORNIA GIANTS

Combining the "BEAUTY'S" rigorous growth and the Crego or Ostrich Feather type of flower. A true non-lateral type with flowers much larger and more substantial than the improved Crego. Their immense size and beauty as well as their long and sturdy stems make them very attractive in floral work. We offer this year Peach Blossom, Light Blue, Deep Rose, and Dark Purple.

Pkt. 15c, 4 Pkts. for 50c

ASTER PLANTS

In season we offer fine large plants of all Standard Varieties. These are well rooted and sure to give good results. See Plant Dept.



ANNUAL BEDDING PLANTS

We have for early delivery fine large plants that can be set as soon as weather permits and with little care will bloom freely throughout the season. See page 70.

Annual Flower Seeds—Continued

AGROCLINUM—*Everlasting*—Grows about 15 inches high, bearing white or rosy pink flowers, when cut in bud state, can be dried and used for winter bouquets. Sow seeds early in sheltered location and transplant to permanent bed. Mixed. Pkt. 10c, oz. 75c

AGERATUM—(*Mexicanum Nanum*)—Adapted for borders and bedding; covered with feathery blossoms all Summer; sow seed in early Spring in boxes to transplant or sow out of doors and thin to 4 to 6 inches. Shading from dark blue to white. 1 to 1½ feet tall. Dark Blue, White or Mixed. Pkt. 10c, ¼ oz. 25c

ALYSSUM—A dainty little white flower. Fine for borders, edging and rockwork. In borders, sow thickly so as to form masses. Varies in height from 4 to 10 inches. Sow in Spring or late August.

Maritimum—Sweet. Pkt. 10c, oz. 40c

Little Gem. Pkt. 10c, oz. 75c

Procumbens—Of trailing habit; profuse bloomer. Pkt. 10c, oz. 75c

AMARANTHUS—Handsome foliage and interesting flowers, making a striking effect in borders and beds. Thrives in hot, sunny situation with rather poor soil. 2 to 5 feet. Sow early and transplant.

Salicifolius—Willow leaved. Pkt. 10c, oz. \$1.50

Caudatus—Graceful, drooping flowers.

Pkt. 10c, oz. 75c

Tri-color, or Joseph's Coat—Foliage scarlet, yellow and green. Pkt. 10c, oz. 75c

BACHELOR'S BUTTON—*Centaurea Cyanus* — or *Corn Flower* — A hardy annual, easily cultivated. Produces handsome flowers of a great variety of rich colors borne on tall, branching stems, with but little foliage. Striking and handsome. Sow seed in open ground early and transplant. 1 to 2 feet tall.

Fine Single Mixed. Pkt. 10c, oz. 25c

Fine Double Mixed. Pkt. 10c, oz. 75c

Single Blue. Pkt. 10c, oz. 50c

Double Blue Florist Strain. Pkt. 10c, oz. 75c

Double Pink Florist Strain. Pkt. 10c, oz. \$1.25

BALLOON VINE—A rapid growing climber. Blossoms very small and white. Light, graceful foliage. Bears curiously inflated seed pods. Sow seed where it is to remain. Succeeds best in light warm soil. 10 to 12 feet tall.

Pkt. 10c, oz. 40c

BALSAM—“*Lady Slipper*”—Handsome plants, producing masses of various colored flowers, half hardy. Curious seed pods which, when ripe, will explode when touched. If sown in May should bloom from July until frost. 1 to 1½ feet tall.

Double Camellia Flowered—Mixed.

Pkt. 10c, ¼ oz. 25c

CATCHFLY—*Silene*—A hardy annual, yielding for a long time a profusion of umbels of bright colored flowers in various shades of pink. Fine for border or rockery. The plant is covered with glutinous moisture, to which flies adhere; hence its name. Sow in boxes and transplant as soon as large enough to handle. Grows 4 to 6 inches tall.

Fine Mixed—All Colors. Pkt. 10c, oz. 45c

CALLIOPSIS—Very showy and attractive, always covered with a mass of bright flowers ranging in color through yellow, crimson and maroon. Sow where plants are to remain, thinning to 6 to 12 inches. In sunny situation plants will bloom all Summer. Fine cut flowers. 1 to 3 feet tall.

Crimson King. Pkt. 10c, oz. 50c

Golden Wave (*Drummondii*) Pkt. 10c, oz. 50c

Coronata Maxima. Pkt. 10c, oz. 50c

Tall Single Mixed. Pkt. 10c, oz. 35c

Tall Double Mixed. Pkt. 10c, oz. 40c

Dwarf Mixed. Pkt. 10c, oz. 50c

CANDYTUFT—*Iberis*—One of the most highly prized annuals for beds or masses, very useful for cutting. For early blooms sow indoors, transplanting to garden when 2 to 3 inches high. Sowings every two weeks in the open will flower from July until frost. Grows 1 to 1½ feet tall.

Rose Cardinal, Crimson, Lavender, White and Mixed. Pkt. 10c, oz. 65c

CASTOR BEAN—*Ricinus*—Tropical appearing foliage plant. Highly ornamental, of stately growth and having large leaves of bronze or glossy green. Should not be planted until soil is warm. Grows 3 to 5 feet tall.

Sanguineus—Brilliant scarlet stems and fruit.

Pkt. 10c, oz. 25c

Zanzibariensis—Surpasses all in size and beauty of colors. Mixed. Pkt. 10c, oz. 25c

Mixed—Best varieties. Pkt. 10c, oz. 25c

CALENDULA—*Pot Marigold*—The well-known Pot Marigold, valued by Europeans for flavoring soups and stews. Flowers are dried in Fall and kept in paper bags for use. In mild climates this plant will bloom nearly all the year around. Colors range through yellow, orange and gold. 1 to 2 feet tall. Plant in early Spring in open ground.

Orange King—Double Pkt. 10c, oz. 35c

Meteor—Double. Pkt. 10c, oz. 25c

Lemon Queen Double. Pkt. 10c, oz. 25c

Double Mixed. Pkt. 10c, oz. 15c

CELOSIA CRISTATA—*Cockscomb*—Very attractive and showy, producing massive heads of deeply colored flowers. Colors red, purple and yellow. Sow very thinly in boxes indoors, transplanting to other boxes or thumbpots until little combs appear. If wanted for border, may be set with combs in a straight line. Grows 9 to 12 inches tall.

Cockscomb Tall. Pkt. 10c, oz. \$0.75

Dwarf Empress. Pkt. 10c, oz. \$2.50

Dwarf Fine Mixed. Pkt. 10c, oz. \$2.00

CELOSIA PLUMOSA—(*Feathered*)—Large plummy heads. For pots or open ground. Keeps well when cut. Grows 1 to 2 feet tall.

Finest Mixed. Pkt. 10c, oz. 95c

Childsii—(*Chinese Wool Flower*)—A unique form of the feathered cockscomb, growing 2 to 3 feet high, each branch terminated with a large head of rich crimson flowers that look as if made out of silky wool. Effective in beds and borders. Also valuable for cutting, as they can be dried, retaining their bright color for weeks. Pkt. 15c



Annual Flower Seeds—Continued

COSMOS—Seed sown indoors in March or April and transplanted to open ground will produce plants 3 to 5 feet high by September, which thereafter and until November will yield hundreds of blossoms 3 inches across; they are of various shades, from pure white to purplish crimson. Both foliage and flowers are unsurpassed for bouquets. (Plants in season.)

Lady Lenox—A magnificent type of extraordinary size and rare beauty. Color a delightful pink. Beautiful. Pkt. 10c, oz. 50c
Lady Lenox—White. Pkt. 10c, oz. 50c

Klondyke—Blossoms very early and continuously; 3 to 4 feet high; flowers large, orange, borne on long stems. Pkt. 10c, oz. \$1.50

Mam. Flowering—Mixed. Pkt. 10c, oz. 75c
New Ea. Flowering Double Mixed. Pkt. 25c
Double Crested or Anemone Flowered—Mixed. Pkt. 20c, $\frac{1}{4}$ oz. 65c
Pink Beauty. Pkt. 25c, $\frac{1}{4}$ oz. 75c
Crimson King. Pkt. 25c, $\frac{1}{4}$ oz. 75c
White Queen. Pkt. 25c, $\frac{1}{4}$ oz. 75c

CHRYSANTHEMUM—Very showy, effective and desirable as Summer flowering plants. Hardy annuals. Sow seeds in flats very early in Spring and transplant to garden when soil is warm. Grows 1 to 2 feet.

Carinatum — Northern Star — Giant white, black center. Pkt. 10c, oz. 50c

Carinatum—Single finest mixed. Pkt. 10c, oz. 40c

Corinarium—Double finest mixed. Pkt. 10c, oz. 40c

DELPHINIUM—See Larkspurs.

CLEOME—A splendid plant for large beds or shrubby border. Of branching habit, each branch producing a large head of attractive flowers. Sow seed in open ground as soon as weather is warm and settled. Height $3\frac{1}{2}$ feet. Fine for beds.

Mixed. Pkt. 10c, $\frac{1}{4}$ oz. 25c

CENTAUREA—Sweet scented flowers on long, strong stems. Will last several days when cut. Colors white, pink, rose and purple. Sow where plants are to remain, thinning to 12 inches apart. Grows 1 to 3 feet tall.

White, Purple, Rose. Deep Lavender and Mixed. Pkt. 10c, oz. \$1.50

Suaveolens—Yellow. Pkt. 10c, oz. \$1.25

Moschata—Mixed. Pkt. 10c, oz. \$1.25

Candidissima—Dusty Miller. Pkt. 10c, oz. \$3.00

CLARKIA—Hardy annual of easy growth, produces a fine effect massed in beds, bright and attractive. Fine for cutting. Does well in shade. Sow early in open ground and thin to 6 inches. Grows 1 to 2 feet tall.

Elegans—Salmon Queen—Double. Pkt. 10c, oz. \$1.75

Elegans—Scarlet Queen—Double. Pkt. 10c, oz. \$1.75

Elegans—White—Double. Pkt. 10c, oz. \$1.50

Elegans—Double mixed. Pkt. 10c, oz. \$1.00

COBAEA SCANDENS—(Plants in Season)—A handsome, rapid-growing, climbing plant, having large, bell-shaped flowers, beautiful foliage and peculiarly delicate and curious tendrils. Seeds should be planted on edge in shallow boxes of soft soil, covering with glass until seedlings appear. Transplant to permanent location about May. Grows to a height of 12 to 15 feet.

Purple. Pkt. 10c, oz. \$1.25

White. Pkt. 10c, oz. \$1.75

CYPRESS VINE—*Ipomoea Quamoclit*—Climber with rapid growth. Has delicate fern-like foliage and great numbers of star-shaped blossoms with long tubes. Soak seeds over night in warm water, then sow where vine is to grow. Does best in warm, sunny location. Grows 10 to 15 feet.

White, Scarlet or Mixed. Pkt. 10c, oz. \$1.25

EUPHORBIA—Branching, bushy plants with smooth, glossy leaves of various colors. Suitable for beds or borders. Sow seeds in open ground, transplanting when few inches high. Give plenty of room. Good foliage plant. Height 2 to 3 feet.

Variegata, Snow on the Mountain.

Pkt. 10c, oz. \$1.25

Heterophyllia—Painted leaf. Annual pointsetta. 3 feet. Pkt. 10c, oz. \$2.25

ESCHSCHOLTZIA—*California Poppy*—These are generally classed and grown as annuals. See page 65.

FOUR O'CLOCK—*Mirabilis Jalapa*—Marvel of Peru—Easy culture, bearing a profusion of bright flowers of various shades. Flowers open at four o'clock, close in morning. Sow seeds early in the open and transplant. Should be 15 to 18 inches apart. Grows 2 to 3 feet high.

Choice Mixed. Pkt. 10c, oz. 35c

GAILLARDIA—*Blanket Flower*—Very showy garden plant, with brilliant flowers; free blooming from early Summer until Autumn; especially effective in masses. Sow seeds early where plants are to bloom. Thin to 12 inches. Colors crimson, brown and orange. Splendid cut flower. Height 1 to 2 feet.

Picta Lorenziana—Double; finest mixed; annual. Pkt. 10c, oz. \$1.00

GODETIA—Profuse and constant bloomers, compact and bushy in growth. Colors rose, crimson, white and pink. Sow seeds indoors in boxes and transplant. Succeeds in poor soil. Height 1 foot.

Dwarf. Fine Mixed. Pkt. 10c, oz. \$1.00

Gloriosa. Dark Red. Pkt. 10c, oz. \$1.25

Duchess of Albany. White. Pkt. 10c, oz. \$1.00

GOURDS—Good climber. For covering verandas and trellis work; rapid growth, bearing fruits of curious shapes. Plant after soil is warm. Height 10 to 20 feet.

Calabash. Pkt. 10c, oz. 35c

Mixed Varieties. Pkt. 10c, oz. 35c



ANNUAL FLOWER SEEDS—Continued

GYPHOSIPHILA—(Annual)—**Grandiflora Elegans**—Easily raised from seed. Grows from 18 to 24 inches, bearing beautiful, large, star-shaped flowers in great profusion. First sowings should be made in flats very early and transplanted out when 2 to 3 inches high. Make later sowings in open ground for continuous supply. White. Pkt. 10c, oz. 35c

HELICHRYSUM—*Straw Flower*—**Monstrosium**—Everlasting. One of the best for Winter bouquets. Hardy annual. Colors, red, yellow and white. Effective for bedding. Sow seeds in open and transplant or thin to 12 inches. Double Mixed. Pkt. 10c, oz. \$1.00

HYACINTH BEAN—*Dolichos Lablab*—Rapid growing, ornamental, climbing annual, bearing clusters of beautiful purple and white flowers, followed by highly ornamental seed pods. Sow seeds early where vine is to remain. Height 10 to 12 feet. Mixed. Pkt. 10c, oz. 20c

HOLLYHOCKS—*New Annual*—**Hybrida Semperflorens**—This splendid variety will bloom in August, from Spring planting, continuing until frost. This is a great advantage, as other varieties do not bloom until the second year. Try them. Finest Single Mixed. Pkt. 10c, oz. \$1.00

HUNNEMANNIA—*Giant Yellow Tulip Poppy* or *Bush Eschscholtzia*—**Fumariaefolia**—Best of the poppy family for cutting. Seed sown early in May will, by the middle of July, produce plants covered with their large, buttercup yellow, poppy-like blossoms, and never out of flower until a hard frost. Height 2 to 3 feet. Pkt. 10c, oz. 75c

ICE PLANT—*Mesembrianthemum Crys-talinum*—Pretty Summer trailing annual for vases and rock work; leaves covered with ice-like drops. Sow seeds early in boxes. Height ½ to 1 foot. Pkt. 10c, oz. 75c

KOCHIA CHILDSII—*Summer Cypress*.—Forms symmetrical highly decorative bushes, foliage green, turning to fiery red in Autumn. Sow seeds in open and thin to 15 inches. Valuable for Summer hedges. Height 1 to 2 feet. Pkt. 10c, oz. 25c

LINUM—*Crimson Flax*—**Annual**—Beautiful and effective; hardy, about 18 inches high; covered with bright scarlet flowers. Pkt. 10c, oz. 35c

LARKSPUR—*Annual*—The annual Larkspurs are quite hardy and bloom in the later Summer months, furnishing flowers of striking beauty in form and color. Tall varieties are suitable for shrubberies and borders, while the dwarf sorts produce charming effects in beds. Height 1 to 2 feet.

Dwarf Rocket—Finest colors, Double mixed. Hardy annual. Pkt. 10c, oz. 65c
Tall Double Stock Flowered—Lustrous Carmine, Dark Blue, Rose, White or Finest mixed. Pkt. 10c, oz. \$1.50

LOBELIA—Delicate, low-growing, annual plants of the greatest value for borders, ribbons, edgings, rock work and hanging baskets. Sow seeds very thinly in boxes, covering with glass until seedlings are through surface. Plant out when 1 inch high. Height 6 to 8 inches.

Saphir—Deep blue with white eye, long, drooping flower stalks; fine for hanging baskets or boxes; grows rapidly. Pkt. 10c, oz. \$7.50

Speciosa—Dark blue and dark leaved, trailing. Pkt. 10c, oz. \$3.50

Gracilis—Blue, trailing; beautiful for baskets. Pkt. 10c, oz. \$2.00

Crystal Palace Compacta—Dwarf flowers, very fine and rich, bright blue; finest for bedding and edging. Pkt. 10c, oz. \$3.50

LUPINUS—Annual sorts. Hartwegi. Dark Blue, Lt. Blue, Pink, White, Mixed.

Pkt. 10c, oz. 75c

MARIGOLD—*Tagetes*—A hardy plant in dwarf and tall varieties; foliage bright green and deeply cut. Flowers are various shades of yellow and brown. Sow seeds early in flats and transplant to garden when 3 to 4 inches tall. For specimen plants soil should be light, rich and deeply spaded. Height 1 to 2½ feet.

African. Tall or Dwarf, Double Mixed. Pkt. 10c, oz. 75c

French. Dwarf or Tall Double Mixed. Pkt. 10c, oz. 75c

French. Tall Striped Double. Extra select. Pkt. 10c, oz. \$1.00

Golden Ball. New Dwarf. Very compact. Pkt. 10c, oz. 75c

Legion d'Honneur. Dwarf Single. Pkt. 10c, oz. 75c

MIGNONETTE—*Reseda*—A quick-growing fragrant annual. Produces the largest and finest spikes of blossoms during cool, moist weather of early Spring and late Fall months, but will flower freely throughout the Summer from seed sown early in Spring. A second planting should be made about the first of August to furnish large, fine spikes of flowers during the cool Fall months. Sow seeds where plants are to remain, as seedlings are difficult to transplant successfully. Thin to 6 to 12 inches. Height 1 foot.

Odorata Grandiflora—Large, well-formed, fragrant flowers. Pkt. 10c, oz. 35c

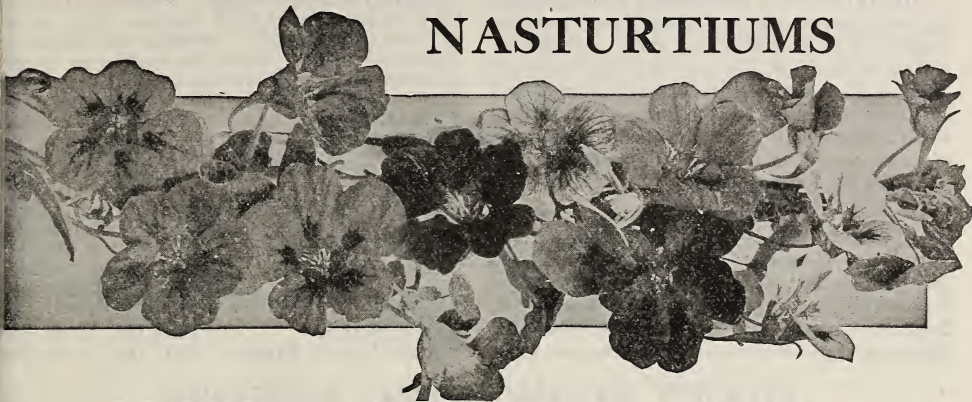
Machet—White. White with reddish tinge. Best white, dwarf variety. Pkt. 10c, oz. 75c

Golden Queen—Dense, dwarf growth; flower golden yellow; very fragrant. Pkt. 10c, oz. 75c

Goliath—Red. Dwarf, compact, flowers red; fine. Pkt. 10c, oz. \$2.25

MOON FLOWER—*Ipomoea Mexicana Grandiflora*—Rapid growing climber belonging to the "Morning Glory" family. At night and on cloudy days vine is covered with fragrant white flowers 4 to 5 inches in diameter. Seeds must be soaked then planted where vine is to remain, thinning to 12 inches. Height 10 to 12 feet. Pkt. 10c, oz. 75c

NASTURTIUMS



NASTURTIUMS are hardy annuals, of easy culture and flower best where the soil is not too rich. The new hybrids include various shades of rose, salmon, bright red, pale yellow, etc., either self-colored or spotted, mottled, striped and margined.

For covering trellises, fences, arbors, piazzas, trailing from vases, over rockwork, for bedding, etc., nothing can equal the gorgeous effect produced by their marvelous wealth of bloom, borne in uninterrupted splendor from early Summer until cut down by frost. The seeds, picked green and pickled in vinegar have a piquant, appetizing flavor that is a valuable addition to relishes or pickles.

Tall Varieties

CHAMELEON—Variable flowers marked and blotched in many brilliant colors.

KING THEODORE—Large, velvety crimson flowers, very attractive dark green leaves.

MOONLIGHT-PEARL—Soft primrose.

DUNNETT'S ORANGE—Large, bright, pure orange flowers.

PRINCE HENRY—Fine lemon yellow, clear carmine blotches.

SALMON QUEEN—Extra large light salmon, suffused rosy salmon.

RUBY—Beautiful ruby red. Fine open flowers.

NAMED VARIETIES

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 60c

MIXTURE—Standard tall varieties.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 45c

Ivy Leaved

TALL MIXED—Climbing habit with pointed leaves of rich ivy green veined white, resembling English Ivy. Flowers have narrow petals and are quite distinct and pleasing.

Pkt. 10c, oz. 25c, $\frac{1}{4}$ lb. 75c

DWARF MIXED. Pkt. 10c, oz. 25c, $\frac{1}{4}$ lb. 75c

MORNING GLORY—The tall varieties are popular, well known, rapid growing climbers of the easiest cultivation, attaining a height of 10 to 12 feet. Very fine for covering arbors, trellises, porches, etc. The Minor, or Dwarf varieties flower very freely and do not require support. Plant seeds early where plant is to remain.

Convolvulus Major—Tall, choice single, mixed, all colors.

Pkt. 10c, oz. 25c

Double Mixed—Tall.

Pkt. 10c, oz. 60c

Convolvulus Minor—Dwarf mixed.

Pkt. 10c, oz. 25c

Imperial Japanese Fringed—These have very large fringed flowers in a great variety of the most exquisite colorings; handsome, variegated foliage. Mixed.

Pkt. 10c, oz. 40c

Dwarf Varieties

CHAMELEON—Variable colorings in bronze, crimson and yellow, rich markings.

CLOTH OF GOLD—Brilliant scarlet, golden yellow leaves.

EMPRESS OF INDIA—Intense scarlet, purplish green leaves.

PRINCE HENRY—Lemon yellow, with carmine blotches.

VESUVIUS—A rich salmon orange, dark foliage.

NAMED VARIETIES.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 60c

MIXTURE—Standard varieties.

Pkt. 10c, oz. 20c, $\frac{1}{4}$ lb. 50c

Variegated

TALL MIXED—Foliage beautifully marked and marbled yellow and cream on the green ground, some leaves appearing almost white. Flowers come in all colors and markings.

Pkt. 10c, oz. 25c, $\frac{1}{4}$ lb. 85c

DWARF MIXED. Pkt. 10c, oz. 25c, $\frac{1}{4}$ lb. 85c

MIMOSA—Sensitive Plant—Pudica—A good foliage plant. Very curious and interesting, leaves close if touched or shaken; annual. Height 1 to 1½ feet.

Pkt. 10c, oz. \$1.00

NIGELLA—Love-in-a-Mist, or Devil-in-the Bush—Compact growing, free flowering plants with curious looking, showy flowers and finely cut foliage. Colors blue and white. Sow about April and thin to 8 to 10 inches. Height 1 to 2 feet. Hardy annuals.

Mixed Colors.

Pkt. 10c, oz. 40c

Miss Jekyll—Cornflower Blue.

Pkt. 10c, oz. 75c

NICOTIANA—A very showy plant, producing star-shaped flowers of delicious perfume. Taken up in the Fall, cut back and potted, will bloom freely all Winter. Half hardy annual; 3 feet high. Sow seeds in boxes indoors or in a sheltered situation in the open. Transplant when 2 inches high. For best results give plenty of room, very rich soil and full sunlight.

Affinis—White. Sweet scented. Pkt. 10c, oz. 75c

Sylvestris—Pure white, fragrant, drooping flowers; deep green foliage. Pkt. 10c, oz. 75c

Sanderæ—Resembles the "Affinis," but unlike that variety, does not close up in the daytime. The plants are covered with carmine-red, fragrant flowers. Pkt. 10c, oz. \$1.25

Hybrida—Splendid mixed. Pkt. 10c, oz. \$1.00

OENOTHERA—*Evening Primrose*—Elegant for growing in an exposed position, in border or on rockery; constant bloomer all Summer. Shades of yellow. Sow seeds early in boxes, covering very lightly with fine soil firmly pressed down. Transplant seedlings.

Fine Mixed. Pkt. 10c, oz. 60c

PORTULACA—*Rose Moss*—Brilliant dwarf annuals, only 6 inches high, luxuriating in warm situations, and blooming profusely in early Summer to Autumn. For low beds and masses of color from Spring until frost, they are indispensable: colors range through innumerable shades of red, yellow, pink, white, striped, etc. Sow seeds indoors. Thrive best in hot and dry situation.

Single Mixed. Pkt. 10c, $\frac{1}{4}$ oz. 30c

Double Mixed, Extra. Pkt. 10c, $\frac{1}{8}$ oz. 75c

GIANT FLOWERING PANSIES

FOR years local experts have grown our Giant Pansies and co-operated in securing the finest strains from the world's most celebrated growers. These have been carefully re-selected and bred up to their present surpassing excellence, and for giant size, substance, form and coloring we have never seen Pansies to compare with them. Named varieties and special strains are grown separately and the seed collected by hand and carefully blended into what we believe to be the finest mixture ever offered.

ADONIS—A distinct and beautiful shade of light blue with white center and dark blotch, most pleasing and attractive. Pkt. 10c

GOLDEN QUEEN—A rich, pure yellow of the grandest form and size. A valuable addition to the yellows. Pkt. 10c

GIANT DARK BLUE—A splendid blue black, very elegant, and of good substance. Pkt. 10c

GIANT STRIPED—A superior strain of truly giant pansies, with the most beautiful striped markings in richest dark shades. Pkt. 10c

VIOLET BLUE—A new giant variety of a brilliant, dark indigo blue, with violet luster, each petal having a large, dark brown, veined blotch. Edges slightly ruffled. Pkt. 10c

KING OF THE BLACKS (*Giant*)—Immense velvety back flowers of the finest quality the largest and best black pansy. Pkt. 10c

MADAME PERRET—A beautiful and distinct type with edges of petals frilled—bordered white, colors are dark wine—pink and red, beautifully veined. The earliest of the Giants, and has the sweetest perfume. Pkt. 15c

SNOW FLAKE—A grand, pure white, of extra fine quality. Pkt. 10c

CORNFLOWER BLUE—A dainty cornflower blue, large, good substance. Pkt. 10c

FANCY STRAINS OF MIXED PANSIES

FINE MIXED—A fine assortment of colors. Pkt. 10c, $\frac{1}{4}$ oz. 50c

TRIMARDEAU GIANTS—Of remarkably large size and robust growth: very fine. Pkt. 10c, $\frac{1}{4}$ oz. 85c, oz. \$3.00

OREGON GIANT PANSIES IN BLOOM—From March until June we offer our famous "Oregon Giant" Pansy plants in full bloom. Put up one dozen in a basket. Mailing weight four pounds.

Price: 60c to \$1.00 per basket, not prepaid.



MASTERPIECE—*Giant Ruffled*—The mammoth size, richness and beauty of colorings and frilled or ruffled character of the petals make "Masterpiece" one of the most distinct and interesting Pansies. Pkt. 25c

OREGON GIANT PANSIES—MIXED—Our Oregon Giants are a selection of the finest strains and named varieties from the foremost American and foreign growers. This seed has been gathered by hand for several seasons from selected plants grown here in Oregon and will produce plants and flowers of unsurpassed quality in the most pleasing colors and shades.

Pk t. 25c, $\frac{1}{4}$ oz. \$1.25, oz. \$4.50

Annual Flower Seeds—Continued

PETUNIA—Hybrida—During the whole season it is covered with large, showy blossoms, which are always bright and fresh, in spite of heat and drought. The flowers are of an almost infinite variety of colors and markings, and quite as varied in form: large and small, fringed and plain, double and single. Hardy Annual. Sow seeds very thinly indoors under glass. Care should be taken to save the weaker seedlings as they produce the finest flowers. Transplant to garden when soil is warm. Height 1 to 1½ feet.

Single Choicest Mixed. Pkt. 15c
Double Choicest Mixed. Pkt. 35c
Single Fringed—Finest Mixed. Pkt. 25c
Double Fringed Mixed. Pkt. 50c
Giants of California—Choicest Mxd. Pkt. 25c

Elks Pride—Deep (Elks) Purple. Large flowers, fine for window boxes, borders and bedding. Pkt. 50c

City of Portland—One of the finest shades of pink. Flowers large and ruffled. Fine for borders or bedding. Pkt. 50c

POPPY—Papaver—Magnificent, showy flowers borne separately on tall stalks in many bright and charming colors. Some are hardy annuals, others are perennials. Sow seeds very early where they are to remain. Barely cover seed with fine soil and press down firmly. Thin to one foot. If cut before fully open blossoms will last several days. Height 1 to 3 feet.

Double Carnation Flowered—Fringed: assorted colors. Mixed, Pkt. 10c, oz. 40c

Shirley—Finest Mixed. The range of color, extending from white through delicate shades of pink, rose and carmine, to the deepest crimson: fine for cutting. Pkt. 10c, oz. 50c

Double American Flag—White bordered with scarlet. Pkt. 10c, oz. 50c

King Edward—Large flowers produced with great freedom. Deep scarlet, shaded crimson, red, with large black blotch. Height 2½ feet. Pkt. 10c, ¼ oz. 25c

Glaucum — (Tulip Poppy)—Brilliant scarlet flowers 3 inches across. Pkt. 10c, oz. 75c

California Poppy—Eschscholtzia—They commence to bloom within a few weeks' time from Spring-sown seed and continue to flower profusely until late in the Autumn, forming nice, bushy plants 1 to 1½ feet high. Colors yellow, red, orange and white. Fine delicate foliage. Sow seeds either in Fall or Spring where plants are to remain. Seedlings are difficult to transplant. Thin to 12 inches.

Single White or Mixed. Pkt. 10c, oz. 30c

Golden West—Yellow with orange center—flowers large. Pkt. 10c, oz. 50c

Carmine King. Pkt. 10c, oz. 75c

Mandarin—Inner side of petals rich orange, outer side brilliant scarlet; very striking; single. Pkt. 10c, oz. 60c

SALPIGLOSSIS—Painted Tongue—Showy, funnel-shaped flowers of large size. Fine for beds. Half-hardy annuals. Sow seeds in boxes indoors or in a hotbed and transplant.

Superbissima—Finest mixed. Pkt. 10c, ¼ oz. 60c

PHLOX DRUMMONDI—Unrivalled for richness and beauty of color, ranging from white to the deepest scarlet and purple. For cutting, for bouquets or for bedding in masses they are unsurpassed. Hardy annual, one foot high. Sow as soon as soil is warm. Transplant about one foot apart.

Large Flowering—Scarlet, white or mixed.

Chamois Rose Pkt. 10c, ¼ oz. 75c
Isabellina—Pale Yellow Pkt. 10c, ¼ oz. 75c
Kermesina Splendens—Crimson with white edge. Pkt. 10c, ¼ oz. 75c
Diamond Mixture Pkt. 10c, ¼ oz. 75c
Dwarf Mixed Pkt. 10c, ¼ oz. \$1.25

Star Phlox—(Cuspidata)—Flowers have a distinctive star-like appearance, with white margins, excellent for bouquets. Pkt 10c, ¼ oz. 75c

PYRETHRUM—Very ornamental plants, for both foliage and flowers. Seeds should be sown very early in boxes. Cover very lightly with sifted soil and press down firmly. Transplant to permanent location as soon as large enough to handle. If flowers are allowed to form, foliage will change from yellow to green. Height 1 to 2 feet.

Roseum Hybridum Grandiflorum—Painted lady. Pkt. 10c, ¼ oz. 25c

Parthenifolium Aureum, or Golden Feather. Gold leaved, flower white. Pkt. 10c, ¼ oz. 25c

PINKS—The Dianthus family embraces some of the finest of all flowering plants. The blooms are of the richest and most pleasing colors, and nothing can surpass the exquisite fragrance of some varieties. They are hardy, and become perennial in warm climates. Sow seeds in boxes indoors and plant out in good soil when 1 to 2 inches high.

Chinensis—Single mixed. Pkt. 10c, ¼ oz. 15c

Chinensis—Double mixed. Pkt. 10c, ¼ oz. 25c

Heddwigii—Single mixed. Color varies from richest velvety crimson to delicate rose.

Pkt. 10c, ¼ oz. 30c

Heddwigii—Double mixed, Large flowering; splendid. Pkt. 10c, ¼ oz. 50c

Heddwigii Diadematus Fireball—Extra double brilliant dark scarlet. Very beautiful.

Pkt. 10c, ¼ oz. 50c

Heddwigii Laciniatus Snowball—Double white. Pkt. 10c, ¼ oz. 50c

Heddwigii Laciniatus—Fine single fringed, finest assorted colors. Pkt. 10c, ¼ oz. 50c

SALVIA—Flowering Sage—Very ornamental, flowers borne in spikes of fiery red or crimson; and continue in bloom in open ground until after severe frosts. Start in heat and transplant into light soil, one to two feet apart. Excellent for bedding in masses or single planting. Hardy annuals.

Salvia Zurich—*New Dwarf Early.* The finest of all Dwarf Salvias. Very floriferous.

Pkt. 10c, ½ oz. \$1.00

Salvia Splendens—Brilliant scarlet.

Pkt. 10c, ¼ oz. \$1.00

Bonfire—(Clara Bedman)—One of the finest Salvias ever introduced: compact bush about two feet in height and diameter.

Pkt. 10c, ¼ oz. \$1.25



Annual Flower Seeds—Continued

SCABIOSA—*Sweet Scabious, or Mourning Bride*—Free flowering annuals; white, carmine, lilac, maroon, etc.; effective for garden decoration and valuable for cutting. Sow seeds in open as soon as soil is warm, thinning to 8 to 10 inches. Blooms from early July until frost. Height 2 to 2½ feet.

Double—Mixed. Pkt. 10c, ¼ oz. 25c

Double—Mixed Dwarf Pkt. 10c, ¼ oz. 25c

SCHIZANTHUS—*Butterfly Flower*—Beautifully fringed and delicately colored flowers so numerous as to hide the foliage. Splendid bedding plant. Seeds sown in open come into bloom in a few weeks. Fine pot plant for house in Winter. Height 1 to 2 feet.

Mixed Colors. Pkt. 10c, ¼ oz. 25c

Snapdragon—*Antirrhinum*—One of the most useful and showy of border plants of almost every color. Also makes splendid cut flowers. They have recently been much improved and are now really magnificent. For best results plant seeds indoors very early, planting out when about 3 inches high. Height 2 to 3 feet.

Tall Giants—White, yellow, scarlet.

Pkt. 10c, ¼ oz. 25c

Queen Victoria—Pure white. Pkt. 10c, ¼ oz. 50c

Silver—Pink Pkt. 25c, ¼ oz. \$1.00

Firebrand—Rich, deep red. Pkt. 10c, ¼ oz. 70c

Bonfire—Orange Buff Pkt. 10c, ¼ oz. 65c

Grenadier—Ora. and Wh. Pkt. 10c, ¼ oz. 50c

Rose, Dove Pkt. 10c, ¼ oz. 65c

Dwarf, Finest Mixed. Pkt. 10c, ¼ oz. 25c

Diamond Mixed Pkt. 10c, ¼ oz. 40c

STOCKS—*Double Ten Weeks*—These popular flowers are easily grown, and are so highly fragrant and of such beauty that they deserve a place in every garden. They are great improvements over the Gilliflowers of the olden times. Seeds should be sown under glass in a warm place, giving plenty of air after seedlings are up. Transplant when about 2 inches high. Winter stocks should be potted before frost. Height 1 to 1½ feet.

Dwarf Large Flowering—White, crimson rose, light blue, or mixed. Pkt. 15c, ½ oz. 60c

Virginian Stock—A fine, early flowering plant.

Hardy annual. **Mixed.** Pkt. 10c, ¼ oz. 15c

STOCKS—*Early Branching, Large Flowered.*

Beauty of Nice—Very large flowers of a delicate flesh pink. Extra fine.

Pkt. 15c, ½ oz. 60c

Crimson King—Rich blood crimson. Pkt. 15c

Mont Blanc—Purest white. Pkt. 15c

Monte Carlo—Canary yellow. Pkt. 15c

Queen Alexandra—Soft rosy lilac. Pkt. 15c

Mixed. Pkt. 15c, ½ oz. 60c

STOCKS—*Dresden Perpetual or Branching*—These ten weeks everblooming are popularly called, "Cut and Come Again." Sown in March they flower profusely from July until frost: their best period being late Autumn. Very fragrant.

Princess Alice—White. Pkt. 15c, ¼ oz. 75c

La France—Blush pink. Pkt. 15c, ¼ oz. 75c

Brilliant—Blood red. Pkt. 15c, ¼ oz. 75c

Sapphire—Violet. Pkt. 15c, ¼ oz. 75c

Creole—Canary yellow. Pkt. 15c, ¼ oz. 75c

May Queen—Pale blue. Pkt. 15c, ¼ oz. 75c

SUNFLOWER—*Helianthus*—Stately growing annuals with immense golden yellow flowers; effective for garden decoration. Height 6 to 8 feet.

Dwarf Double—Bright golden yellow flowers three inches across. Pkt. 10c, oz. 65c

Globosus Fistulosus—Saffron, very large, double and handsome. Pkt. 10c, oz. 45c

Multiflora—Beautiful, double yellow flowers.

Pkt. 10c, oz. 60c

THUNBERGIA—*Black Eyed Susan*—Rapid-growing annual climbers; splendid for trailing over trellises, fences, etc.; buff, white, orange, etc., four to six feet high. Grows readily from seed sown in the open.

Mixed Colors. Pkt. 10c, ¼ oz. 45c

VERBENA—Start seed in the house or under glass early in the Spring and transplant after three or four inches of growth. They flower in July and continue strong and healthy until frost. Height 8 to 12 inches.

Mammoth Mixed—Selected: extra large, fine.

Pkt. 15c, ¼ oz. 75c

Fine Mixed. Pkt. 10c, ¼ oz. 50c

Candidissima—White. Pkt. 10c, ¼ oz. 70c

Scarlet Defiance. Pkt. 10c, ¼ oz. 75c

Pink Shades. Pkt. 10c, ¼ oz. 75c

Blue Shades. Pkt. 10c, ¼ oz. 75c

ZINNIAS—*New Dahlia Flowered*—This is a new and distinct race of Zinnia, which will greatly increase the popularity of this flower. The plants of this new race are very sturdy and produce many flowers with stout stems. The flowers in full bloom often measure four inches in depth and six to eight inches in diameter. In general appearance they compare favorably with the Show Dahlias. Easily grown from seed sown in the open and thinned to one foot apart.

New Novelties—In Dahlia Flowered ZINNIAS. Separate colors. Pkt. 35c, 5 for \$1.25

Exquisite—Light rose with center a deep rose.

Golden State—Rich orange yellow. Yellow in bud, turning to an attractive orange when in full bloom.

Crimson Monarch—By far the largest and best of red shades. Flowers often eight inches in diameter.

Sunrise—A combination of pleasing apricot shades, changing to buff. Flowers large and of good form.

Buttercup—Immense deep creamy yellow.

Mixed—All colors. Dahlia Flowered Pkts. 25c

Picotée Type. All colors mixed. Pkt. 15c

Victory Quilled. All colors mixed. Pkt. 15c

Grandiflora Robusta—Double giants, Apricot yellow, Deep flesh, Golden yellow, Rose king, Salmon, Shrimp pink, White. All colors mixed.

Pkt. 10c, oz. \$1.25

Dwarf Double Mixed. Pkt. 10c, ¼ oz. 30c



HARDY PERENNIAL FLOWER SEEDS

AGROSTEMMA—*Coronaria*—Foliage silvery white, blossoms crimson, resembling single pinks. Strikingly beautiful for beds, ribbons and borders. Seeds should be sown where plants are to remain and thinned to prevent crowding. Height 2 feet.

Perennial. Pkt. 10c, oz. 60c

ALYSSUM—*Saxatile*—Showy, bright yellow flowers, blooms the first season if sown early indoors. Fine for borders. Height 6 to 12 inches

Pkt. 10c, ¼ oz. 50c

ANCHUSA—*Italica*—**Dropmore**—A splendid, free blooming plant for hardy borders, growing to a height of about 5 feet. Flowers are of a beautiful gentian-blue color. Seeds should be sown in sheltered place outdoors and transplanted when large enough to handle. Should be 2 to 3 feet apart.

Pkt. 15c, oz. \$1.50

ARABIS—*Rock Cress*—One of the earliest and prettiest Spring flowers unequaled for rockeries or edging, withstands the drought, pure white flowers. Sow seeds in permanent location and thin to 6 inches. Height 6 to 8 inches.

Alpina. Pkt. 10c, ¼ oz. 25c

ASTERS—Hardy Perennial—*Michaelmas Daisy*—Handsome flowers of easy culture, appearing at a time when flowers are scarce; make attractive garden display as well as cut flowers. If seed is sown indoors very early and seedlings set in open as soon as large enough to handle, they will bloom the first season. Do best in a sunny location. Height 2 to 3 feet.

Large Flowering Mixed. Pkt. 10c, ¼ oz. 50c

CANTERBURY BELLS—*Campanula*—Very ornamental garden plants growing 2½ feet high, producing large, nodding and charming bell-shaped flowers of many exquisite shades; hard biennial. Sow seeds in May. Keep seedlings well watered and transplant to permanent location in July or August. Give rich soil and plenty of room.

Medium Single—Blue, rose, white or mixed.

Pkt. 10c, ¼ oz. 35c

Calycanthemum—(*Cup and Saucer*)—White, pink, light blue or mixed. Pkt. 10c, ¼ oz. 75c

Persicifolia—Very fine, blooms in June, Blue or White. Pkt. 15c, ¼ oz. \$1.00

Pyramidalis—Stately, hardy plant for pot culture or garden. Blue. Pkt. 10c, ¼ oz. 75c

CARNATION—*Dianthus Caryophyllus*—Carnations are Tender Perennials, being easily winter killed. Splendid for cut flowers, deliciously fragrant. Colors pink, white and red. Sow seeds indoors in March. Transplant seedlings to other boxes when 1 inch high. Keep them growing well until soil is warm, then transfer to open garden. Height 1 to 1½ feet.

Double Grenadin—Comes into bloom very early and the charming, double, scarlet flowers are very valuable for forming bouquets. Red, White, Yellow.

Pkt. 15c

Margaret Carnations—Finest Double Mixed. Bloom in four months from seed.

Pkt. 10c, ⅛ oz. 75c

Giant or Malmaison—Mixed Pkt. 15c

Double Dwarf Vienna Mixed—Large flowered and comes into bloom early, producing flowers of many colors and beautiful markings; a large proportion double.

Pkt. 10c



Dahlia Flowered Zinnia. See page 66

COIX LACHRYMAE—*Job's Tears*—A broad-leaved, ornamental grass, having large, tear-shaped, hard, shining, pearl-gray seeds. Plant in prepared seed bed in open, transplant to permanent location.

Pkt. 10c, oz. 25c



Perennial Flower Seeds—Continued

CINERARIA—Magnificent and indispensable flowering plants for the window garden. The flowers of white, blue, violet, and crimson shades, covering the plant with a sheet of bloom. Seeds very fine. Should be sown under glass in very fine soil. Pot off seedlings and shift from size to size as necessary.

Hybrida—Grandiflora, prize mixed. Extra choice. Mixed. Pot Plant. Pkt. 50c

Fine Mixed. Pkt. 15c

Dusty Miller—(*Maritima Candidissima*)—Beautiful silvery-leaved border plant; half hardy perennial. Pkt. 10c, $\frac{1}{4}$ oz. 35c

COLUMBINE—*Aquilegia*—Universal favorite for hardy borders and beds.

Chrysantha—Golden yellow.

Pkt. 15c, $\frac{1}{16}$ oz. 50c

Chrysantha—Grandiflora Alba. Beautiful, pure white. Good for forcing. Pkt. 15c, $\frac{1}{16}$ oz. 60c

Single Mixed. Pkt. 15c, $\frac{1}{16}$ oz. 50c

Double Mixed. Pkt. 15c, $\frac{1}{16}$ oz. 50c

Long Spurred Varieties. Pkt. 25c, $\frac{1}{16}$ oz. 75c

Skinneri—Scarlet tipped with white.

Pkt. 25c, $\frac{1}{16}$ oz. 75c

COREOPSIS—*Lanceolata*—Large, showy, bright yellow flowers produced in great abundance from June until frost; fine for cut flowers. Sow seeds indoors very early, transplanting to open when soil is warm. Height 1 to 2 feet. Pkt. 10c, $\frac{1}{4}$ oz. 25c

DAISY—*Bellis Perennis*—Popular low-growing plant bearing beautiful flowers. Hardy perennial. Sow seeds in boxes about August and transplant to cold frame or some location where they may be protected the first Winter. Plant in permanent location early in Spring. Height six inches.

Longfellow—Double pink. Pkt. 15c, $\frac{1}{16}$ oz. 40c

Giant Double Monstrosa—Red, white, pink or mixed. Pkt. 25c, $\frac{1}{16}$ oz. 60c

Double Quilled—Dark red, Pkt. 25c, $\frac{1}{16}$ oz. \$1.

Shasta Alaska—Very hardy; profuse bloomers; flowers very large and borne on long stems, single; petals pure glistening white, dark center. Pkt. 15c

DAHLIA—A magnificent, Fall-blooming tuberous-rooted plant. Sow seeds in boxes indoors very early, transplanting to open when danger from frost is past. Will bloom first season. Tubers of the best ones may be saved for following season. See page 78.

Double Mixed. Pkt. 15c, $\frac{1}{4}$ oz. 65c

Single Mixed. Pkt. 10c, $\frac{1}{4}$ oz. 50c

Cactus—Flowers odd and fantastic in shape; all colors. Finest Mixed. Pkt. 15c, $\frac{1}{16}$ oz. 50c

DATURA—Large, strong-growing plants, trumpet-shaped flowers, white, sometimes tinted with blue. Roots can be preserved like Dahlias. Sow seeds in sheltered bed in open and transplant when 2 to 3 inches high. Give plenty of room and rich soil. Height 2 to 3 feet.

Fastuosa Huberiana—Double mixed.

Pkt. 10c, oz. \$1.00

Cornucopia—Very fragrant. Pkt. 10c, oz. \$1

DIGITALIS—*Fox Glove*—A tall growing biennial, with large leaves and spikes of varicolored and spotted flowers. Fine for borders or background. Sow seeds in prepared seed bed in May. Keep seedlings well watered and transplant to permanent location in July or August. Give rich soil and plenty of room. Height 3 to 6 feet.

Gloxiniiflora—Mixed. Pkt. 10c, $\frac{1}{4}$ oz. 35c

Grandiflora—Yellow. Pkt. 10c, $\frac{1}{4}$ oz. 35c

DELPHINIUM—*Larkspur*—Profuse blooming plants, their tall spikes of many colored flowers produce a striking effect when planted in groups. Sow seeds in boxes indoors in early Spring, transplanting to other flats when second leaf appears. When soil is warm, set in open ground 6 to 8 inches apart, resetting the next Spring, giving rich soil and plenty of room. As a cut flower this is one of the best. Height 3 to 6 feet. See Plant Department.

Chinese Azureum—Blue; fine for cutting.

Pkt. 10c, $\frac{1}{4}$ oz. 50c

Chinese Blue Butterfly. Pkt. 10c, $\frac{1}{4}$ oz. 50c

Chinese Album White. Pkt. 10c, $\frac{1}{4}$ oz. 50c

Belladonna—Light blue. Pkt. 25c, $\frac{1}{8}$ oz. \$1.75

Formosum—Dark blue. Pkt. 10c, $\frac{1}{8}$ oz. \$1.00

Cardinale—Brilliant scarlet. Pkt. 15c, $\frac{1}{8}$ oz. \$1.25

Bellamosum—Same color as *Formosum*, larger, not subject to blight. Pkt. 15c

FORGET-ME-NOT—*Myosotis*—Beautiful Spring favorites of easy growth, bearing clusters of lovely, small blue flowers. They can be left in the open ground except in very cold latitudes. Fine for borders and shady situations. Sow seeds in box or prepared bed in the open. Transplant when two inches high. Height, one foot.

Alpestris—Of trailing habit, with pretty flowers Blue or mixed. Pkt. 10c, $\frac{1}{4}$ oz. 40c

Victoria—Flowers large, bright azure blue; fine for borders and pots. Pkt. 10c, $\frac{1}{8}$ oz. 60c

Semperflorens—Dwarf; continuous bloomer; blue. Pkt. 15c, $\frac{1}{8}$ oz. 65c

GAILLARDIA—*Blanket Flower*—Exceedingly beautiful, showy plants, one to two feet high. Grown in masses they are especially effective; large flowers, two or three inches across, unrivaled for cutting. Seeds sown very early and transplanted as soon as soil is warm will usually bloom in July. Colors range through crimson, orange and brown.

Grandiflora Maxima. Pkt. 10c, $\frac{1}{4}$ oz. 25c

GERANIUM—A half-hardy perennial, easily and quickly grown from seed. Sow seeds thinly in boxes indoors, covering with glass until seedlings appear. When about one inch high transplant to small pots in rather poor soil firmly pressed down. Can later be re-potted in larger sizes or transferred to open garden.

Zonale—Extra choice, single mixed, the well-known bedding Geranium. Pkt. 15c

Lady Washington—(*Pelargonium*)—Foliage green; flowers large. Finest mixed. Pkt. 25c

GEUM—*Chiloense*—Hardy, free-blooming plants. Fine for bouquets. Flowers crimson, double. Blooms all Summer. Height 8 to 12 inches. See Plant Department.

Scarlet Semi-Double. Pkt. 15c

Mrs. Bradshaw—Scarlet. Pkt. 25c

Perennial Flower Seeds—Continued

GYPSOPHILA—*Baby's Breath*—A pretty, free-flowering plant. Fine for bouquets. Seeds very small. Sow in boxes indoors, covering lightly with sifted soil firmly pressed down. Transplant to open as soon as large enough to handle. Height 2 to 3 feet.

Paniculata—Foliage fine; covered with tiny pure white flowers. Hardy. Pkt. 10c, $\frac{1}{4}$ oz. 25c
Paniculata Fl. Pl. New.—About 30% double. Pkt. 15c, $\frac{1}{8}$ oz. \$1.50

HOLLYHOCK, or *Althaea*—The modern Hollyhock is a great improvement over the old type, the flowers being larger and richer colored. For backgrounds there can be nothing better. Hardy. Seeds should be sown in open from Spring to mid-Summer, transplanting to permanent location in late Fall. Give rich soil for best results. Five feet high.

Chaters—Superb strains. Double varieties; of greatest perfection.

Scarlet, Rose, Newport Pink, Maroon, Yellow, White, Mixed. Pkt. 10c, $\frac{1}{4}$ oz. 75c

KUDZU VINE—*Pueraria Thunbergiana*—Beautiful Japan climber, hardy perennial with fragrant purplish-violet, wisteria-like flowers. Height 10 to 12 feet. Pkt. 10c

LEMON VERBENA—Every garden should have a few plants of this fragrant favorite. Its pale green foliage goes well with any flower. Height 1 to 2 feet. (Usually propagated from cuttings, seldom from seed.) Pkt. 15c

LINUM—

Grandiflorum Rubrum—*Scarlet Flax*—One of the most showy bedding plants, fine foliage, with brilliant scarlet-crimson flowers.

Pkt. 10c, oz. 50c

Perenne—Bright blue flowers. Pkt. 10c, oz. 50c

Perenne Album—White. Pkt. 10c, oz. 60c

Flavum—Yellow. Pkt. 15c, oz. \$1.00

LOBELIA—*Cardinalis*—Flowers rich red, dark green foliage. Especially valuable for border decoration. Sow seeds in boxes indoors. Cover very lightly with sifted soil and press down firmly. Cover box with glass until seedlings appear. If sown in January or February, will usually bloom in May. Height 6 to 12 inches.

Pkt. 15c, $\frac{1}{8}$ oz. 75c

LUPINUS—Shrubby plants, bearing long spikes of flowers. Colors white and pink, occasionally blue. Sow seeds in open early in Spring. Transplant when 2 to 3 inches high. Give plenty of room. Height 1 to 2 feet.

Perennial—Mixed. Pkt. 10c, oz. 35c

LYCHNIS—*Rose Champion*—*Jerusalem Cross*—Few plants produce more brilliantly colored blossoms. Flowers are borne in clusters and continue fresh and brilliant for a long time. Hardy, 1 to 2 feet high. Orange, scarlet and crimson. Seeds should be sown where plants are to remain, thinning to prevent crowding.

Haageana Hybrida—Mixed.

Pkt. 15c, $\frac{1}{8}$ oz. 50c

MIMULUS—*Moschatus* or *Musk Plant*—Cultivated for its rich musky odor. Flowers yellow, white or spotted. Height 1 foot. Should have a rich soil and ample moisture. Will bloom first year if seed is sown early. Does best in shady situation.

Pkt. 15c, $\frac{1}{16}$ oz. \$1.00
Tigrinus Nanus, or *Monkey Flower*—Beautifully spotted. Mixed, all colors.

Pkt. 15c, $\frac{1}{16}$ oz. 75c

PAMPAS GRASS—*Cortaderia Argenteum*—A noble ornamental grass, easily grown from seed; producing majestic plumes that are invaluable for winter decorations. Height 6 to 10 feet. Sow seeds thinly in a sheltered place, transplanting to another prepared bed when a few inches high. Set out in permanent location when about 1 year old. See Plant Dept.

Pkt. 10c

PENTSTEMON—*Beard Tongue*—Brilliant bell-shaped flowers borne on long spikes, and produced abundantly all Summer. Colors range through red, rose, cherry, carmine, pink and purple. Should be sown indoors. Cover lightly and press down firmly. Transplant to open.

Mixed. Pkt. 10c, $\frac{1}{4}$ oz. 75c

Gloxinioides "Sensation"—As a bedding plant this takes rank with the *Petunia*. About 2 ft. every branch a spike of flowers in a wide range of bright colors. Treated as *Petunias*.

Pkt. 15c, $\frac{1}{8}$ oz. 75c

PEAS—**Perennial**—*Lathyrus Latifolius*—Similar to Sweet Peas but, not so fragrant: they bloom through a long season, are perfectly hardy, and will live for years. Should be sown near a fence or other support, thinning to 2 to 3 feet apart. Height 4 to 6 feet.

Mixed. Pkt. 15c, oz. 90c

PHLOX DECUSSATA—*Perennial*—Large compact heads of bloom from mid-Summer until Fall. Height 2 to 4 feet. Wide range of colors. Sow seeds early in boxes and transplant seedlings once before placing in permanent location. Usually blooms the first season. Requires 5 to 6 months for seed to germinate. See Plant Department for finest named varieties.

Mixed. Pkt. 10c, $\frac{1}{8}$ oz. 50c

PASSIFLORA—*Passion Flower*—Most interesting and well known climber, bearing singularly beautiful flowers. Height 10 to 12 feet. Blue.

Pkt. 10c, $\frac{1}{4}$ oz. \$1.00

POPPIES—Seeds should be planted in small pots and thinned to one plant in each pot, as they are difficult to transplant. When pot is full of roots, plant in permanent location in good soil. Height 1 to 3 feet.

Bracteatum—Hardy perennial; very showy, red.

Pkt. 10c, $\frac{1}{4}$ oz. 40c

Iceland, or Nudicaule—Bright green, fernlike foliage, formed in tufts from which issue slender stalks about 12 inches high, bearing yellow, white or orange-scarlet flowers in endless profusion and most useful for cutting. Mixed colors.

Pkt. 10c, $\frac{1}{4}$ oz. 65c

Oriental—*Hybrida* mixed. Very hardy and early flowering.

Pkt. 10c, $\frac{1}{4}$ oz. 50c

See Poppy—Page 65.



Perennial Flower Seeds—Continued

RUDBECKIA—*Golden Glow*—Newman—Brilliant orange yellow petals around a large dark center. Useful for borders or as a single group. Sow seeds in a sheltered location and transplant when a few inches high. Height 4 to 6 feet.

Fulgida—Orange yellow; perennial. Pkt. 15c

STATICE—*Sea Lavender*—Splendid for border or rockery, producing panicles of minute flowers, can be dried and used for Winter bouquets.

Latifolia—Sow like other perennials in flats or cold frames and transplant when large enough into permanent position, 12 to 18 inches apart. Blue. Pkt. 10c

SWEET ROCKET—*Hesperis*—An old, hardy garden favorite. Fragrant white flowers, 2 to 3 feet high, resembling Perennial Phlox. Sow seeds early and transplant once before placing in permanent location. Pkt. 10c, ¼ oz. 15c

Sweet Sultan—See *Centaurea*

SWEET WILLIAM—*Dianthus Barbatus*—Remarkably free-flowering plant of brilliant colors, ranging from snow white to darkest crimson and purple, and emitting a very delicate and refreshing fragrance. May be sown in open and thinned to 6 to 8 inches. Height 1 to 1½ feet.

Single Mixed—Very beautiful.

Pkt. 10c, ½ oz. 50c

Dunnetti—Dark crimson, single.

Pkt. 10c, ½ oz. 60c

Pink Beauty—Pink.

Pkt. 10c, ¼ oz. 75c

Coppery Red.

Pkt. 10c, ¼ oz. 75c

Pure White—Single.

Pkt. 10c, ½ oz. 75c

Double Mixed.

Pkt. 10c, ½ oz. 75c

CARDINAL CLIMBER—Considered the most beautiful and brilliant annual climber. A strong and rapid grower, with fern-like foliage literally covered with a blaze of circular cardinal red flowers from midsummer until frost. Annual.

Pkt. 10c, oz. \$1.50

Popular Annual Bedding Plants

Our stock of Perennials is very complete and for immediate results they will be found very satisfactory. For further information on them refer to pages 73 to 76.

Annual bedding plants are so inexpensive and satisfactory that they should be planted extensively for cut flowers in the home as well as for garden effects. They also make splendid displays in tubs and porch boxes.

We have for early delivery fine large plants that can be set as soon as weather permits and with little care will bloom freely throughout the season. Prices are per dozen, f.o.b. Portland.

Alyssum.....	\$0.50	Clarkia.....	\$0.50	Larkspur.....	\$0.50	Pinks.....	\$0.50
Asters.....	.50	Cosmos.....	.50	Lobelia.....	.50	Salpiglossis.....	.50
Carnations.....	1.00	English Daisies..	.50	Marigold.....	.50	Salvia.....	.70
Calliopsis.....	.50	Forget-Me-Not..	1.00	Mignonette.....	.50	Stocks.....	.50
Candytuft.....	.50	Geraniums, 75c to	3.00	Petunia.....	.75	Verbena.....	.50
Centaurea.....	.50	Heliotrope.....	.75	Phlox.....	.50	Zinnias.....	.60

Plant Annuals in the bulb beds. After the bulbs are through blooming they should be allowed to grow until late Summer, and the beds can be made very attractive with annual flowering plants without disturbing the bulbs. Forget-me-nots, Petunias, Pinks, Poppies, Verbenas and Candytuft are among the best.



FLOWER SEEDS—GREENHOUSE CULTURE

ASPARAGUS SPRENGERI—*Emerald Feather*—One of the best of the new so-called ferns. Feathered foliage; useful for bouquets, wreaths or sprays, remaining perfect for weeks after cutting. Seeds should be sown under glass with night temperature of about 65 degrees. Will germinate in 4 to 6 weeks. Height 2 to 4 feet. (For Plants see plant Department.)
Pkt. 10c, 50 seeds 25c

ASPARAGUS PLUMOSUS—*Asparagus Fern*—One of the prettiest house plants. The leaves are bright green, gracefully arched, surpassing Maidenhair Ferns in grace, delicacy of texture and richness of color. Culture same as Sprengeri. Height 6 to 12 feet. (For plants see Plant Department.)
Pkt. 25c, 50 seeds 50c

BEGONIA—Begonias are among the most beautiful of flowering plants, especially adapted to pot culture. They are difficult to grow from seeds even in a greenhouse. Generally propagated by cuttings. (See Plant Department.)
Gracilis—Pink, White, Bonfire, Luminosa.
Pkt. 25c

Salmon Queen.
Pkt. 25c

CALCEOLARIA—Beautiful flowers of unique form and colors, ranging from red, yellow, brown and orange. Fine for pot culture. Seeds should be sown in flats very thinly, covering lightly with sifted soil firmly pressed down. As soon as large enough to handle, seedlings should be transplanted to thumb pots, shifting from size to size as they become potbound. Of little value outdoors as the hot sun ruins the blooms.
Hybrida—Finest mixed.
Pkt. 50c

CANNA—*Indian Shot*—Large, ornamental, tropical looking plants of easy culture. Soak seeds in warm water for several hours, or until they commence to swell, then plant under glass. When second leaf appears transplant into pots and keep under glass until soil outside is warm. Colors red and yellow. Height 2 to 6 feet. (For Canna Bulbs see Plant Department.)
Crozy's Dwarf Mixed.
Pkt. 10c, oz. 50c

COLEUS—Probably the best known and most popular of ornamental foliage plants. Leaves of all shades and colors. Tender perennial. Sow seeds in flats indoors. Tender. Leaves of all shades and colors. Tender perennial. Sow seeds in flats indoors. Transplant seedlings to other flats until settled warm weather, when they may be transplanted to open garden. Should be potted for house culture before frost. Height 1 to 2 feet.
Extra Choice Mixed.
Pkt. 25c

CYCLAMEN—Florists' pot plant. Beautiful Winter and Spring flowering plants for the window and greenhouse. Special cultural instructions on request.

Giganteum Hybridum—White with carmine eye, dark red, salmon-pink, light rose. Pkt. 25c

DRACAENA—Ornamental greenhouse plant. Very desirable.

Indivisa Lineata—Narrow, dark foliage.
Pkt. 10c, ¼ oz. 30c

GREVILLEA ROBUSTA—*Silk Oak.*
Very beautiful and graceful foliage plant with fern-like foliage—a splendid pot plant. Sow seeds in boxes in late Winter or early Spring, potting the seedlings when 2 to 3 inches tall. Re-pot frequently to maintain rapid growth. Height 2 to 4 feet.
Pkt. 10c, oz. \$1.00

HELIOTROPE—Flowers in large clusters of lovely shades of blue. Delightfully fragrant and free-blooming. Splendid for bedding, pot culture or bouquets. Start under glass very early in Spring, transplanting to pots or open garden. Will bloom in 2 to 3 months.
Choice Mixed
Pkt. 10c, ¼ oz. 40c
Finest Select Mixed—Very fine.
Pkt. 10c, ¼ oz. 50c

LANTANA—A free-flowering shrubby plant, suitable for out-door or pot culture. The flowers emit an agreeable odor and are of many shades of purple, orange and white. Half-hardy perennial. Sow seeds thinly in boxes indoors, covering very lightly. Transplant to garden when 2 to 3 inches high. Height 1 to 2 feet.

Hybrida Fine Mixed.
Pkt. 10c, ¼ oz. 35c

PRIMULA—*Primrose*—The first three varieties named below are hardy, early blooming garden plants, and the others beautiful winter-blooming house plants. Soak seeds in warm water for 24 hours, then sow thinly in shallow boxes of soft sandy soil, covering lightly with sand. Press down firmly and cover with glass until through the surface. When large enough to handle transfer into other boxes of fine soil. Remove to permanent location when about 2 inches high.

Polyanthus—Early blooming, dwarf growing plants. Valuable for outdoor bedding. Mixed colors.
Pkt. 15c, ¼ oz. 75c

Vulgaris—Yellow, common, English Primrose.
Pkt. 15c, ¼ oz. \$1.00

Japonica, or Japanese Primrose—The beautiful, large, various colored flowers stand in whorls, pyramidically arranged on short flower stems one foot high: though perennial, new plants flower more freely, and seeds should be sown every year. Mixed varieties.
Pkt. 15c, ¼ oz. 75c

Sinensis, or Chinese Primrose—The beautiful, large fringed flowers stand in pyramids arranged on short flower stems. Blossoms of every shade of color, from pure white to deep crimson, and even deep blue: especially fine for Winter and Spring flowers in the house: Finest mixed.
Pkt. 25c, ½ oz. \$2.00

Sinensis—Double finest mixed. Pkt. 50c
Obconica Grandiflora—Beautiful single flowers. This is really an ever-blooming plant, producing elegant clusters of flowers continuously throughout the year. Fine mixed.
Pkt. 15c, ¼ oz. \$2.00

SMILAX—*Medeola Asparagoides*—Charming, tender, perennial climber for greenhouse or window gardens. The foliage and stems are of pleasing light green: excellent for decoration. If grown from seeds, should be treated same as *Asparagus Sprengeri*. (See Plants.)
Pkt. 10c, ¼ oz. 35c



CLASSIFICATION OF FLOWERS

This will enable you to tell at a glance what flowers are suitable for any position

Annual Bedding Plants or Tall Border Plants 1 to 2 feet

Ageratum, Tall	blue, white or mixed
Asters	various colors
Balsam	various colors
Brachycome	blue, white, rose
Browallia	blue and white
Calendula	mixed
Candytuft	various colors
Celosia	crimson
Centaurea	yellow, rose
Chrysanthemum	yellow, white, gold
Clarkia	pink, scarlet
Eschscholtzia (California poppy)	crimson, white, yellow
Four O'Clock	various colors
Gaillardia	orange, scarlet
Gilia	white, lilac rose
Godetia	variegated rose and white
Gypsophila (for bouquets)	white
Linum (scarlet flax)	scarlet
Marigold	yellow, red, brown and variegated
Mignonette	white, yellow, red
Nasturtium, dwarf	various colors
Nigella (Love in a mist)	various colors
Petunia	various colors
Poppy	various colors
Phlox	various colors
Scabiosa	white, lilac, carmine and maroon
Schizanthus	various colors
Salvia	scarlet
Stocks (10 weeks)	all colors
Viscaria	various colors
Zinnia	various colors

Everlasting Flowers

Acroclinium	all colors
Globe Amaranth, Gompherena	various colors
Helichrysum	various shades
Rhodanthe	pink, white
Statice	white, blue and yellow

Tall Growing Plants for Grouping—Annual From 2½ feet up

Amaranthus	scarlet
Calliopsis	yellow, brown, maroon
Castor Bean	
Cosmos	white, red, pink
Euphorbia	
Kochia	
Larkspur	various colors
Nicotiana	white
Rudbeckia	yellow
Salpiglossis	various colors
Scabiosa Grandiflora	all colors
Sunflower	yellow

Low Edging Plants—Annual

Ageratum Dwarf	blue, white or mixed
Alyssum	white
Bulbs	all colors
Calliopsis, Tiger Star	reddish brown
Candytuft	various colors
Celosia, Dwarf	
Centaurea, Dusty Miller	
Dianthus	various colors
Lobelia Compacta	blue
Mignonette	white, yellow, red
Nemophila	blue
Pansy	all colors
Portulaca	yellow, pink, white, scarlet
Verbena	various colors

Climbing Vines—Annual

Balloon Vine	white
Scarlet Runner Bean	scarlet
Canary Bird Vine	yellow
Cypress Vine	
Gourds	
Moonflower	white
Morning Glory	
Nasturtium, Tall	various colors
Sweet Peas	all colors
Wild Cucumber	

Bedding Plants—Perennial—1 to 2 feet high

Agrostema	pink
Aster	various colors
Begonia	various colors
Calceolaria	various shades and colors
Calla	
Candytuft	all colors
Carnation	yellow, white, red, pink and variegated
Cineraria	various colors
Coleus	
Columbine	yellow, violet, rose
Daisy (Shasta)	white
Gaillardia	yellow, orange, scarlet
Geum	scarlet
Linum	various colors
Lynchis	scarlet
Pentstemon	various colors
Salvia	scarlet
Statice	white, blue, yellow
Stocks (perpetual)	all colors
Sweet William	various colors
Tritoma	orange, red
Vinca	white, rose
Wallflower	various colors

Low Edging Plants—Perennial, 6 to 12 inches high

Alyssum Saxatile	yellow
Anemone	various colors
Pinks	various colors
Phlox, English	various colors
Edelweiss	
Forget-me-not	blue
Oxalis	yellow, pink, lavender, white
Poppy, Iceland	white, orange, yellow
Primula	various colors
Pyrethrum	various colors
Viola	yellow, white and blue

Tall Growing Shrub Plants—Perennial For Grouping from 2½ feet up


Abutilon	
Anchusia	
Aster	various colors
Canna	various colors
Canterbury Bells	various colors
Chrysanthemum	various colors
Columbine	yellow, violet, rose
Dahlia	all colors
Delphinium	various colors
Digitalis	
Fuchsia	
Geranium	scarlet, white, pink
Gladiolus	various colors
Goldenrod	yellow
Hollyhock	various colors
Lantana	red, white, yellow
Lavender	
Lobelia Cardinalis	scarlet
Lupin	shades of blue
Poppy, Oriental	various colors
Phlox, Perennial	various colors
Scabiosa	
Snappedragon, Tal'	various colors
Wallflower	various colors

Climbing Vines—Perennial

Ampelopsis, Boston Ivy and Virginia Creeper	
Clematis	white, lavender, red
Cobea Scandens	various colors
Kudzu Vine	violet

For Rockeries, Hanging Baskets or Window Boxes

Asparagus Fern	
Edelweiss	
Forget-me-not	blue
Ice Plant	
Lobelia Trailing	blue
Mimulus	yellow
Nasturtium	various colors
Oxalis	yellow, white, pink, lavender
Portulaca	
Thunbergia	buff, orange and white
Verbena	various colors
Petunia	various colors

 PLANTS FOR IMMEDIATE EFFECTS SUPPLIED IN SEASON—SEE PLANT DEPT.

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG

PERENNIAL BORDER AND BEDDING PLANTS

WE OFFER well-rooted specimens that can be safely packed and promptly delivered in perfect condition. If you contemplate large plantings or special effects, let us know your plans and requirements. We can supply in any quantity for every requirement at lowest prices.

By proper arrangement cut flowers and a grand garden display can be obtained throughout the season. The great advantage in planting perennials is their permanency and the fact that they require so little care.

PLANTS, Each 20c; doz. \$2.00, Postpaid

Plants marked by Star (*) are for Rockeries and Borders.

ACONITUM—(*Monkshood*)—Aconites form bushy clumps, and are invaluable for planting under trees or in shady positions.

Wilsoni—4 to 6 feet high, large dark blue flowers, very beautiful.

Fischeri—A dwarf variety growing 18 inches high, with very large pale blue flowers in September and October.

ANEMONE JAPONICA—(*Japanese Wind-flower*)—These beautiful Windflowers are among the most important hardy plants. They begin blooming in August continuing in full beauty till cut down by hard frost.

Alba—Large, snowy white.

Rubra—Beautiful rosy red; stamens bright yellow.

Queen Charlotte—Very large semi-double flowers of La France pink.

Whirlwind—Large, semi-double, pure white flowers.

***ALYSSUM**—(*Saxatile Compactum, Basket of Gold*)—An indispensable plant for the rockery or border, growing 1 foot high and producing in May masses of bright yellow flowers.

***ARABIS**—(*Rock Cress*)—*Alpina*—One of the most desirable of the very early spring flowering plants. Especially adapted for edging and for rock gardens. White.

ANCHUSA ITALICA—(*The Improved Italian Alkanet*)—The Improved Alkanets justly take a front rank among early summer flowering perennials. Their blooming period covering May and June at which time there are few plants of this size and shade in bloom.

Drozmore Variety—Rich gentian blue.

***ARMERIA**—(*Sea Pink or Thrift*)—Attractive dwarf plants that will succeed in any soil, forming evergreen tufts of bright green foliage. Flowers appear in dense heads, on stiff wiry stems from 9 to 12 inches high.

Pink and White.

ASTERS—(*Fall-Flowering Hardy*)—(*Michelmas Daisies*)—These are among the showiest of our late flowering hardy plants, giving a wealth of bloom during September and October. For the best effect should be planted in masses of one color.

Feltham Blue—A pretty aniline blue, very free, 2½ feet.

Glorv of Colwall—Good sized, almost double, ageratum blue flowers; 2½ feet.

Novae Angliae—Bright violet-purple; 4 ft.

***Alpinus**—Indispensable for the rockery; grows 6 to 10 inches high, and bears large showy bluish-purple flowers in May and June.

***Sub Coeruleus**—Twelve inches high, bearing in June and July massive bluish-violet flowers 3 inches in diameter.

ARTEMISIA—(*Lactiflora, Hawthorn scented*)—This comparatively new introduction from China is a most effective flowering plant with erect stems 3½ to 4½ feet high clothed with elegantly cut dark green foliage and terminated by panicles of Hawthorn scented creamy white Spiraea-like flowers.

AGULEGIAS OR COLUMBINES—The Columbines are one of the most elegant and beautiful of hardy plants producing their graceful spurred flowers on stems rising 2 feet or more above the beautifully divided foliage.

White, Pink, Blue, and Yellow.

BELLIS PERENNIS—(*English Daisy*)—Improved double flowering, white or pink.

BLEEDING HEART, OR SEAL FLOWER—An old-fashioned favorite; its long racemes of graceful heart-shaped flowers are always attractive. **Each, 75c**

BOCCONIA—(*Cordata, Plume Poppy or Tree*)—Celandine—A noble, hardy perennial, beautiful in foliage and flower, admirably adapted for planting in the shrubbery borders; 6 to 8 feet high. Flowers of a creamy white color during July and August.

BOLTONIA—(*False Chamomile, Catisquama*)—Among the showiest of our native hardy perennial plants with large single white Aster-like flowers.

CENTAUREA—(*Hardheads or Knapweed*)—Of easy culture, delighting in an open, sunny position. Not only makes a fine display in the border, but is excellent for cutting.

Dealbata—Distinct bright rose colored flowers; July to September; 18 inches.

Macrocephala—Large thistle-like golden-yellow flowers. July and August, 3½ feet.

CEPHALARIA—(*Roundheads*)—*Alpina*—Attains a height of 6 feet, bearing in June and July delicate sulphur yellow flowers.

CAMPANULAS OR BELLFLOWERS—Indispensable, hardy garden flowers, of much variety of form.

***Carpathian Harebell**—A pretty species growing in compact tufts, not exceeding 8 inches high, flowers clear blue and white.

Canterbury Bells—This popular variety in white, pink, and blue.

Peach Bells—Blue and white flowers during June and July; 2 feet.

Chimney Bellflower—The most conspicuous of all Campanulas, 4 to 6 feet high, crowded with large porcelain-blue flowers in August.

COREOPSIS—(*Lanceolata Grandiflora*)—One of the most popular hardy plants. The flowers are a rich golden-yellow and invaluable for cutting; blooms during the entire summer and autumn.



Hardy Perennial Garden Plants—Continued

Plants marked by Star (*) are for Rockeries and Borders. Each, 20c; doz., \$2.00, postpaid.

***CERASTIUM**—(*Snow in Summer*)—Tom-entousum—A desirable low-growing plant with silvery foliage and white flowers in June, suitable for the rockery, or for covering graves.

CHELONE—(*Shell Flower*)—Stately and handsome perennials, growing about 2 feet high, and bearing numerous spikes of large flower heads during the summer and fall.

Glabra Alba—Terminal spikes of creamy white flowers.

Lyoni—Heads of showy purplish-red flowers.

SHASTA DAISY—(*Alaska*)—Immense, fluffy white blooms, with golden eyes, from July to late Fall; fine for cutting; splendid border plants.

DELPHINIUMS OR HARDY LARK-SPURS—One of our very best perennials.

Belladonna—The freest and most continuous blooming of all. A clear turquoise blue.

Bellamosum—This is a dark blue form of the popular light blue Belladonna.

Chinense—A very pretty dwarf species with fine feathery foliage and intense gentian blue flowers.

Formosum—The old favorite dark blue with white center, 3 to 4 feet high.

Kelway's Gold Medal Hybrids—Unquestionably the finest strain of mixed hybrids offered. The original stock came from England, and consisted of the best named varieties.

DIGITALIS—(*Fox Glove*)—The Fox Gloves, old fashioned, dignified and stately, are beautiful in any garden.

Gloxinia-flowered—A beautiful strain of finely spotted varieties.

Lanata—A distinct species, producing dense spikes, 2 to 3 feet high, of odd-looking flowers.

DORONICUM—(*Excelsum*)—One of the most effective, very early yellow spring flowering perennials.

ECHINOPS—(*Globe Thistle*)—An interesting thistle-like plant with large globular heads of bluish-white attractive flowers; 3 feet.

ERYNGIUM—(*Sea Holly*)—Handsome ornamental plants, growing 2 to 3 feet high. The flower heads which are produced from July to September, are useful to cut for vases or to dry for winter bouquets.

Amethystinum—The finely cut spring foliage and the beautiful thistle-like heads are of glistening amethystine-blue.

GAILLARDIA—(*Blanket Flower, Grandiflora*)—One of the showiest hardy plants growing about 2 feet high, combination coloring of yellow, brown, crimson, orange. Blooms until frost.

GAURA—(*Lindenheimi*)—One of the finest hardy plants with 18 inch length branches of white and pink, Orchid-like flowers.

GEUM—(*Avens*)—Pretty border plants, growing about 15 inches high, and producing showy bright-colored flowers from May to July.

Heldreichi—Rich orange-colored flowers.

Mrs. Brodshaw—Large double brilliant scarlet.

GYSOPHILA—(*Baby's Breath*)—The Gypsophilas will thrive in any soil in a sunny position.

Paniculata—When in bloom during July and August it forms a symmetrical mass 2 to 3 feet in height, of minute pure white flowers. When cut it is exquisite in combination with the other flowers.

***Repens**—An elegant trailing plant for the rockery, with clouds of small white flowers in July and August.

HELENIUM—(*Sneeze Wort*)—All of these are desirable border plants, succeeding in any soil in a sunny location.

Rubrum—Robust growing; 3 to 4 feet high, with bright terra-cotta red flowers.

Autumnale—Golden-yellow flowers, 5 to 6 feet high.

Riverton Beauty—Rich lemon-yellow, with large purplish-black cone; August and September; 4 feet.

Riverton Gem—Old gold, changing to wall-flower red; 3½ feet.

HELIANTHUS—(*Hardy Sunflowers*)—The perennial Sunflowers are among the most effective hardy plants for planting among shrubbery, or as clumps on the lawn.

Giganteus—One of our native varieties, with bright canary-yellow flowers in September and October; 6 feet.

Maximiliana—The latest of all, perfecting its fine golden-yellow flowers in long, graceful sprays during October; 5 to 7 feet.

Multifloras Fl. Pl.—(*Double Hardy Sunflower*)—Large double Dahlia-like golden-yellow flowers; 4 feet.

***HELIANTHEMUM**—(*Rock or Sun Roses*)—Exceedingly pretty low growing evergreen plants, and during July to September, are quite hidden by a mass of bloom.

Heliosis—(*Orange Sunflower*)—Similar in general habit to Helianthus but commencing to flower earlier in the season.

Pitcheriana—A desirable variety. The flowers are of a beautiful deep golden-yellow.

***HEUCHERA**—(*Alum Root or Coral Bells*)—Most desirable dwarf, compact bushy plants of robust constitution and easy culture, growing 1½ to 2 feet high, and bearing during July and August, loose, graceful spikes of flowers.

Sanguinea—A very free-flowering coral-red.

HYPERICUM—(*St. John's Wort*)—A most desirable border plant, of free and graceful habit, producing long slender, much branched stems. Large size, measuring from 2 to 2½ inches in diameter; in color a rich golden-yellow; 2 feet high.

HOLLYHOCKS—Stately, majestic, hardy plants, from 6 to 8 feet high, which are a necessary part of every old-fashioned garden. Double white, double yellow, double maroon, double rose, double red, double mixed and all colors.

***IBERIS**—(*Hardy Candytuft*)—Most desirable dwarf plants, 8 to 10 inches with evergreen foliage, which is completely hidden with dense heads of pure white flowers early in the spring.

Hardy Perennial Garden Plants—Continued

Plants marked by Star (*) are for Rockeries and Borders. Each, 20c; doz., \$2.00, postpaid.

LINUM—(*Flax*)—Flavum—A pretty plant for the rockery or front of hardy border, producing an abundance of yellow flowers in July; 12 to 18 inches.

Perenne—A desirable plant for the border or rockery, growing 1½ feet high, with light graceful foliage and large blue flowers all summer.

LUPINUS—(*Lupine*, *Polyphyllus*)—Effective plants, producing large spikes of flowers; blooming in May and June.

Polyphyllus—Clear blue.

Albus—A white variety of above.

Rosea—A combination of light and dark shades of pink.

MONARDA—(*Bergamott*)—Showy plants growing from 2 to 3 feet high, succeeding in any soil or position, blooming during July and August.

Didyma Cambridge Scarlet—Brilliant crimson scarlet.

***MYOSOTIS**—(*Forget-me-not*)—A variety that is hardly ever out of flower, useful in a shady spot in the border. Victoria dark blue.

PAPAVER ORIENTAL—(*Oriental Poppy*)—For brilliant coloring nothing equals them during their time of flowering; May and June.

Goliath—Flower rich scarlet.

Perry's White—Pure satiny white with brilliant crimson marking at base of petals.

Salmon Queen—Salmon Pink.

PENTSTEMON—(*Beard Tongue*)—Most useful showy perennials, either for the border or rockery.

Gloxinioides—(*Sensation*)—A beautiful strain, bearing spikes of large Gloxinia-like flowers in a great variety of bright colors, including rose, cherry, crimson, purple, lilac, etc.; 2 feet high.

PHYSOSTEGIA—(*False Dragon-Head*)—One of the most beautiful of midsummer flowering perennials, forming dense bushes 4 to 6 feet high, not unlike a gigantic heather.

Virginica—Bright but soft pink.

Alba—Pure white; very fine.

HARDY PHLOX—Among hardy perennial plants no class is of more importance than the Phloxes, succeeding in almost any soil and position, and flowering through a long season, and while they will continue in good condition and flower freely for many years without attention, yet they respond quickly to and are improved by liberal cultivation.

Albion—Pure white, with a faint red eye.

Beacon—Brilliant cherry-red.

Champs Elysee—A bright rosy-magenta; very effective.

Eclairer—Brilliant rosy-magenta with lighter halo.

Prof. Virchow—Bright carmine, overlaid with orange scarlet.

Rheinlander—A most beautiful salmon-pink, with flowers and trusses of immense size.

R. P. Struthers—Bright rosy-carmine, with claret-red eye.

Thor—A most beautiful and lively shade of deep salmon-pink suffused and overlaid with a scarlet glow. A light, almost white halo surrounds the aniline-red eye.

Coquelicot—Scarlet with crimson eye.

Diadem—Large flowering pure white dwarf.

Europa—Medium, immense trusses of pure white with distinct crimson eye.

Goliath—Truly a giant in growth, color bright crimson carmine, deeper eye.

Geo. A. Strohlein—Medium bright scarlet with crimson-red eye, does not bleach.

Mrs. Jenkins—The best tall early white for massing.

Selma—Tall, large flower; pale rose-mauve with claret eye.

Sunshine—Dwarf, large aniline-red with crimson-red eye and light halo.

Von Lassburg—Medium, one of the largest flowered purest whites in cultivation.

***Phlox Subulata**—(*Moss or Mountain Pink*)—An early spring-flowering type with pretty moss-like evergreen foliage, which during the flowering season is hidden under the masses of bloom. An excellent plant for the rockery, or the border, and invaluable for carpeting the ground or covering graves.

***Alba**—Pure white.

***Lilacina**—Light lilac.

***Rosea**—Bright rose.

NEW PERPETUAL FLOWERING HARDY PINKS—(*Dianthus Allwoodii*)—This is a most important addition to our list of perennial plants. They are perfectly hardy and flower continuously from early spring until late in the autumn; the flowers are much more substantial and larger than the old type of Hardy Pinks, and are borne on long stems suitable for cutting; deliciously clove-scented.

Harold—A splendid large double pure white of very symmetrical form and great substance.

Jean—Pure white with a deep violet-crimson center, a distinct handsome flower.

Mary—Pale rose-pink with light maroon center.

Robert—A delicate shade of old rose with light maroon center; very free.

***HARDY GARDEN PINKS**—Old favorites bearing their sweet, clove-scented flowers in the greatest profusion during May and June, 1 foot.

Elsie—Bright rose with maroon center.

Gertrude—Deep rose color.

Snow—A fine white.

White Reserve—An ever-blooming pure white.

***POLEMONIUM**—(*Jacob Ladder*)—Reptans—Useful border plants, about 12 inches high, succeeding best in a partially shaded position; deep green, finely cut foliage, and spikes of showy blue flowers in May and June.

PLATYCODON—(*Balloon Flower or Japanese Bell Flower*)—The Platycodon are closely allied to the Campanula and form neat, branched bushes of upright habit, 2 to 2½ feet high, producing blue or white flowers from July to October.

Grandiflorum—Deep blue cupped, star-shaped flowers.

Album—A white-flowered form of the above.

PYRETHRUM—(*Persian Daisy—Hybridum*)—Of easy culture in any garden soil where there is good drainage and full exposure to the sun. They prefer to be undisturbed for 2 or 3 years, bloom in June.

Hardy Perennial Garden Plants—Continued

Plants marked by Star (*) are for Rockeries and Borders. Each, 20c; doz., \$2.00, Postpaid.

POTENTILLA — (*Cinquefoil*) — Charming plants for the border, with brilliant single or double flowers that are produced in profusion from June to August; 18 inches.

Atrosanguinea—Rich crimson, single.

Formosa—Single rose-red.

William Rollison — Mahogany suffused orange; double.

PRIMULA VERIS — (*English Cowslip*) — These are one of the most beautiful and interesting of our early spring flowers.

Primrose — *Acaulis*, grossblumige — Large flowering *Elatiar*.

Duplex—Double.

RUDBECKIA—*Golden Glow*—A well known popular plant, a strong robust grower, attaining a height of 5 to 6 feet and produces masses of double golden-yellow Cactus Dahlia-like flowers from July to September.

Maxima—A rare and attractive variety, growing 5 feet high, with large glaucous green leaves and bright yellow flowers.

RANUNCULUS—(*Crow Foot, Buttercup*)—A double-flowered form of our common Buttercup; 2 feet. May and June.

SALVIA—(*Meadow Sage—Axurea*)—Grows 3 to 4 feet high producing August and September pretty sky-blue flowers in the greatest profusion.

Greggi—Makes a shapely, bushy plant about 2 feet high, and from July to late October bears masses of rich brilliant carmine flowers; requires protection in Winter.

***SAXIFRAGA**—(*Megasea*)—These will thrive in any kind of soil and in any position; grow about 1 foot high and are admirable for the front of the border or shrubbery, deep green foliage. Rose-pink flowers which appear very early in the spring. We offer six choice varieties.

SCABIOSA—Handsome border plants, succeeding in any ordinary soil if well drained and in a sunny location. They last a long time when picked and placed in water.

Caucaseia—(*Blue Bonnet*)—A soft and charming shade of lavender, and commences to bloom in June, throwing stems 18 to 24 inches high until September.

Taponica—Lavender-blue flowers, from July to September; 2 feet.

***SEDUM**—Useful and pretty plants for the border, producing their interesting flowers during late summer and fall.

***Spectabile**—One of the prettiest erect-growing species, attaining a height of 18 inches, with broad light-green foliage and immense heads of handsome showy rose-colored flowers.

STATICE—(*Great Sea Lavender*)—A most valuable plant either for the border or rockery with tufts of leathery leaves and immense candelabra-like heads, frequently 1½ feet high and 2 feet across, of purplish-blue minute flowers during July and August; these if cut and dried last in perfect condition for months.

STACHYS — (*Wound Wort*) — *Betonica Grandiflora*—(*Betony*)—Large flowers of purplish-rose; June and July; 15 inches.

STOKESIA—(*Cornflower Aster*)—A beautiful native plant growing 18 inches high, bearing freely from early in June until September, its handsome lavender-blue and white corn-flower-like blossoms.

Cyanea—Bright lavender-blue.

Alba—A pretty pure white variety of above.

SWEET WILLIAM—(*Dianthus Barbatus—London Tufts*)—A well-known attractive, free flowering hardy perennial, producing in early summer a splendid effect in beds and borders, with their rich and varied flowers.

Newport Pink—The prettiest color among Sweet Williams, a lovely salmon or watermelon pink.

Mixed—Containing all colors.

TRITOMA—(*Red-hot Poker or Torch Lily*)—The early free and continuous blooming qualities of this variety has made it one of the great bedding plants, 3 to 4 feet high.

VALERIANA—(*Valerian—Coccinea*)—Showy heads of reddish flowers; June to October; 2 feet.

Alba—A white-flowered form.

Officinalis—Produces showy heads of rose-tinted white flowers during June and July, with delicious strong heliotrope odor; 3 to 4 feet. Hardy Garden Heliotrope.

THALICTRUM—(*Meadow Rye*)—Very graceful, pretty flowered plants with fine cut foliage; great favorites for planting in the hardy border.

Dipterocarpum—Though introduced some years ago, this beautiful species is yet but little known, the flowers are of charming shade of violet-mauve, which is brightened by a bunch of lemon-yellow stamens and anthers. Four feet high.

Glaucum—Fine cut glaucous foliage; bronzy-yellow flowers in June; 2 feet.

VIOLAS OR TUFTED PANSIES—(*Viola Cornuta*)—The improved forms of *Viola Cornuta* are rapidly growing in favor. They flower continuously for nearly eight months in the year, and while their flowers are not so large as some of the pansy, their bright colors and flariferousness make them welcome additions to any garden.

Blue Perfection—Deep purplish-blue.

WALLFLOWERS—The old fragrant favorite; mixed colors, including yellow, brown, etc.

VERONICA — (*Speedwell—Amethystina*) — Amethyst-blue flowers in June and July; 2 feet.

LONGIFOLIA—(*Japanese Speedwell*)—Subsessilis—The showiest and best of the Speedwells; forms a bushy plant 2 to 3 feet high with long dense spikes of deep blue flowers from the middle of July to early in September.

***Repens**—A useful rock or carpeting plant, with light-blue flowers.

MISCELLANEOUS FLOWERING PLANTS

The following includes many useful and beautiful plants for Baskets, Porch Boxes, Bedding and House Plants

ABUTILON ECLIPSE—Handsome variegated foliage; bright pendant flowers of scarlet and gold colors. Fine for vases and baskets. Each 20c

AGERATUM—*Blue Star*—Bedding and border plant growing one foot high. Feathery blue flowers all Summer.

Each 15c, \$1.00 per doz.

CALCEOLARIA—*Shower of Gold*—Pretty clusters of golden yellow flowers all through the season. Each 20c

COLEUS—*Fancy Leaved*—Coleus are the most important of all the fancy leaved bedding plants. They also make very fine pot plants, especially if you have a warm room to winter them in. Each 15c, 6 fine sorts 75c

COMMON IVY—Waxy green leaves, strong growing vine for window and porch boxes or for hanging baskets. Each 15c

GENISTA RACEMOSA—*Shower of Gold*—Its pendant shaped flowers literally smother the plant during the Spring months, while at other times its graceful dark green foliage makes a very ornamental plant. Easily grown. Each 25c, add 10c if postpaid

MESEMBRYANTHEMUM SPECTABILIS—Quilled shaped, succulent leaves with large single thistle-like cerise pink flowers. Fine for baskets, vases or porch boxes. Each 15c

PETUNIA—*Irvington Beauty*—Single-flowered. A very popular bedding and window-box plant. Covered all season with beautiful light pink flowers veined green and shaded to white in the throat. Each 20c, 3 for 50c

SALVIA—*New Zurich*—A distinct and attractive variety of compact dwarf growth, of neatly rounded form, closely set with stiffly erect spikes of bright scarlet flowers. Each 15c, per doz. \$1.25

SMILAX—For using as a green with cut flowers. Fine as a parlor or window plant. Each 15c

VINCA VARIEGATA—Leaves are a glossy green, broadly margined a creamy white. The best of trailing plants for window boxes. Each 20c, 2 for 35c

VERBENA—*New Mammoth*—The Verbena is, next to the Geranium, the most popular of all bedding plants. Assorted colors. Each 15c, doz. \$1.00

WANDERING JEW—*Tradescantia*—White and Red Variegated. Each 15c

Mastodon Pansies in Bloom

From March until June we offer our famous "Mastodon" Pansy plants in full bloom. Put up one dozen in a basket. Mailing weight 4 lbs. Price, 60c to \$1.00 per basket, not prepaid

How We Help Solve Landscape Problems

In line with our efforts to furnish Best Service, we are glad to announce our new Home Beautiful and Landscape Service Department in charge of an experienced and trained landscape designer.

We will be glad to confer and plan with you at our store, or answer questions and make suggestions by mail, without charge. Such service, however, will not be as helpful to you as for our designer to actually see your ground,

go over your problems with you, and help you plan your work as it should be carried out.

We do not aim to make a profit from this Department, yet it must be at least partially self-supporting. We, therefore, make a reasonable charge covering cost of personal visits, plans and service requiring extra time and attention of our landscape designer.

PEONIES

Double Herbaceous

The development and increase in popularity of the Peony has been unparalleled among flowers, and the profusion and duration of bloom, combined with handsome, massive foliage, accommodating habit, and easy culture, render them one of the most popular hardy plants grown for lawn and garden decoration.

PRICES: 65c each; \$7.00 per dozen, F. O. B. Portland; if mailed, postage extra.

ALBERT CROUSSE—Immense, full formed bloom; salmon-pink.

DORCHESTER—Hydrangea pink. Very late.

DUCHESS D'ORLEANS—Deep pink, center tinted salmon. Midseason.

DUKE OF WELLINGTON—Large, sulphur white. Midseason to late.

EDULIS SUPERBA—Brilliant pink. Best Decoration Day paony.

ELEGANTISSIMA—Light, cherry pink. Midseason. Good cut flower.

FELIX CROUSSE—Brilliant red, flamed center. Extra firm; very double.

FESTIVA MAXIMA—Large, early, white. Carmine dots in center.

GOLDEN HARVEST—Blush white, tipped with light crimson.

MARIE LEMOINE—Large, late, sulphur white.

MASTERPIECE—Brilliant Tyrian-rose. Free bloomer.

MONS. JULES ELIE—Immense flower. Glossy pink. Fragrant.

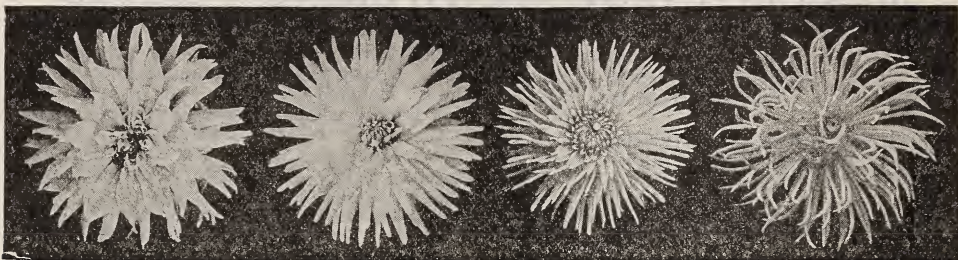
OFFICINALIS ALBA—Opens pink soon changing to white. Earliest.

OFFICINALIS RUBRA—The early red flowering peony.

QUEEN VICTORIA—White, blush tint. Great Decoration Day flower.

ROSEA—Late red variety.

DAHLIAS



IN THE SELECTION OF DAHLIAS only those varieties of known merit should be considered. The great Dahlia Specialists of Europe and America have set a high standard, established by their years of comparative trials and you will have greater satisfaction and better values from their tested varieties which we offer, and which have been officially recognized, than you can possibly obtain from untried varieties of doubtful origin.

OUR TRIALS ARE VERY EXTENSIVE and are conducted by a practical Dahlia expert of wide experience. All tests are made in the field without irrigation and the Dahlias we list represent the "survival of the fittest," the best of the standard varieties and meritorious novelties of the most famous producers, varieties that are recognized the world over. They are true to name, erect bloomers and good keepers.

IT IS IMPORTANT that your Dahlias be recognized varieties and **true to name**. If not, you cannot hope to exhibit them successfully.

CULTURE

DAHLIAS will grow to perfection in any good garden soil, preferably one that contains a little sand. Plant as soon as the frost is gone and the ground warm, cutting the tuber to a single strong eye, and placing it on its side at a depth of about 6 inches, in ground that has been previously well cultivated. An excellent way to start Dahlias is to sprout the tubers in a green house and set out the rooted plants. These are generally believed to give more and better flowers, but is more trouble than planting the bulbs. Rows should be 4 feet apart, plants 18 inches to 3 feet apart in the row, depending on whether planted for a hedge or for specimen plants. Cultivate thoroughly until ready to bloom, then deep tillage must cease and only the surface be lightly stirred, as deep cultivation at this time is fatal to blooming. Tall varieties should be staked.

If you use commercial fertilizer, do not apply until the plant starts growth, then work it into the top soil, 5 or 6 inches from the plant. Bone meal is an excellent fertilizer for Dahlias but must be applied early, as it is slow in action. When the plant is well up, say 6 to 10 inches, pinch off the top, leaving 2 or 3 joints. This will cause it to branch out into a more sturdy, bushy growth. Water freely.

Some Rare Varieties of Special Merit For 1923

PATRICK O'MARA—(*Decorative*)—The flowers are 8 inches in diameter and borne on long, strong, erect stems.

The color is an unusually soft and pleasing shade of orange-buff, slightly tinged with rose. One of the most lasting cut-flower dahlias.

Each \$2.50

ROSEMAROR—(*Decorative*)—Giant blooms 9 to 12 inches across, color a beautiful rich rosy pink. Sure to become popular.

Each \$2.50

EDITH CAVELL—(*Paeony*)—Enormous flower on very long, stout stems. Without doubt one of the greatest novelties ever offered. The flowers are of the full petaled Peony flowered type. Color is an elegant reddish bronze, shaded with old gold.

Each \$1.50

F. R. AUSTIN—One of the most striking and valuable paeony Dahlias in existence. The beautifully colored flowers are of large size, averaging 6 to 8 inches across. Color, the outer petals are very long, creamy yellow, suffused, banded and shaded rich crimson; the inner petals are yellow at base tinting lighter, and suffused pink and crimson. The plant is a strong, vigorous grower, an extremely early and free bloomer, and continues to bloom the entire season, making it most valuable for garden and exhibition.

Each 75c

THE GRIZZLY—(*Decorative*)—A rare novelty of deep, rich crimson-maroon, on perfect stem. Of immense size and a prolific bloomer.

Each \$1.50

DR. HARRY TEVIS—(*Decorative*)—Odd shade of old rose, suffused with gold and shaded apricot. True stock.

Each \$1.00

MARCELLA—(*Decorative*)—A delightful, clear, soft pink, variety that is bound to become a great favorite with everyone, especially Florists.

Each \$1.50

MRS. EDNA SPENCER—(*Hybrid Cactus*)—Large new variety of a delicate shade of orchid pink. Beautiful form and stout stems. Extra free bloomer and a vigorous grower.

Each \$1.00

QUEEN ELIZABETH—This new Paeony Dahlia is the highest type yet produced in the class. The color is a beautiful rosy mauve. The large flowers are facing, on very long (2½ to 4 ft.) stems, slender, yet stiff, holding the flowers erect. The plant is a very clean, strong grower and free bloomer, every shoot produces a flower. It is a variety that just will bloom. A flower that should be in every collection. Valuable for cutting, exhibition and the garden.

Each \$1.25



FINEST CACTUS DAHLIAS

From comparative tests in the field we have selected the following as being the best of their types and color. This list contains many of the newest Dahlias as well as the best of the older ones.

Prices 25c DAHLIAS \$2.50 doz.; 40c DAHLIAS \$4.00 doz.
35c DAHLIAS \$3.00 doz.; 50c DAHLIAS \$5.00 doz.

Prices F. O. B. Portland; if mailed, postage extra.

RED AND SHADES

***BORDER KING**—Large, incurved flower of deep, rich, glowing scarlet. A beautiful exhibition variety. **Each 75c**

***CONQUEST**—Beautiful dark, rich crimson o large size with narrow, incurved and slightly twisted petals. Very fine erect habit of growth; long, wiry upright stems. **Each 50c**

NORMAN—New. Bright orange red. Very large flowers; extra fine for exhibition. Dwarf grower. **Each 75c**

KALIF—A giant flower, color a brilliant pure scarlet. The immense blooms are freely borne on long, strong stems and make a wonderful display. **Each 50c**

MRS. FERDINAND JEFFRIES—Immense deep velvety garnet red flowers. **Each 35c**

MRS. SEARLE—Variegated; tips of petals white, shaded blackish red throughout. **Each 35c**

WHITE

CAPTAIN SCOTT—(*English Cactus*)—A very free flowering white with long petals. Good stems and constant bloomer throughout season. **Each 50c**

MRS. DOUG. FLEMING—Without doubt one of the best whites. Very narrow, incurved florets, and so numerous as to make monster flowers. Extra free and constant; erect stem. **Each 50c**

MRS. WARNAAR—New Hybrid Cactus, creamy white, tinted delicate pink; one of the best to date. **Each 60c**

PINK AND SHADES

GEO. WALTERS—One of the largest and best varieties to date. Salmon pink with gold suffusion in the center. Wonderful bloomer, with long, stout stems. A leader and always in great demand. **Each 75c**

MARGARET BOUCHON—A large brilliant, yet soft rose pink with white center and tips; one of the finest of all. **Each 50c**

STABILITY—Bright and attractive pure, deep pink. **Each 35c**

PIERROT—Lovely, deep amber, usually boldly tipped white. Flowers are of immense size, very double and produced freely. One of the best. **Each 50c**

FRANCES GRAHAM—Giant salmon-rose colored flower, slightly on the hybrid-cactus type. **Each 50c**

SALMON ROSE—Petals broad and curled, light salmon rose, with gold center. **Each 35c**

LA FAVORITA—(*California Hybrid Cactus*)—This splendid new variety is a beautiful brilliant salmon, shading from a dark reddish salmon in the center to salmon pink at the twisted points. **Each \$1.00**

YELLOW AND SHADES

JOHANNESBURG—Bright gold, which is admired by all; monster blooms are produced freely the entire season on good strong stems. **Each 35c**

GOLDEN WEST—California Dahlia of great beauty. Free blooming, on long stems. Color Golden Yellow. **Each 50c**

RECORD—Rich, oriental red, shading to yellow in center; very free bloomer; fine stems. **Each 35c**

EDITH CARTER—Yellow, heavily tipped with bright carmine. Very erect habit and stems. A brilliant showy flower admired by everyone. **Each 35c**

F. W. FELLOWS—One of the largest Cactus Dahlias, blooms freely on long stems. Orange with narrow straight petals. **Each 50c**

HOFFNUNG—A beautiful chamois-rose with light yellow at the base of the long, incurved petals. Wonderful free flowering giant hybrid cactus of great merit. **Each 50c**

MELODY—Clear yellow, heavily tipped white; large, incurved flower with good stems. A free bloomer and best of its color. **Each 50c**

YELLOW KING—Deep sulphur-yellow. **Each 35c**

WOLFGANG VON GOETHE—(*H. C.*)—Rich apricot shade overlaid bright carmine. **Each 50c**

LAVENDER

INDOMITABLE—Long, narrow petals, perfectly incurved; color rosy mauve. **Each 50c**

THE QUAKER—Delicate lavender blush; a very unusual shade; early and free. **Each 35c**

PATRICIA—(*Oregon Hybrid Cactus*)—While not large, this flower of white shaded lavender has a great future as a cut flower, not only on account of its good keeping qualities and grand stem but for its dainty coloring. **Each 75c**

POM PON DAHLIAS

Same as the Show type, except they are of diminutive size, but have longer stems and are great bloomers. They are all ideal for cut flowers, as they are very long keepers.

BELLE OF SPRINGFIELD—Brick red; smallest variety. **Each 15c**

PRIDE—Dark crimson-scarlet; very perfect form. **Each 25c**

LITTLE BELLE—A clear, mauve pink throughout. **Each 15c**

SAN TOY—White, tipped with tyrian rose. **Each 15c**

CATHERINE—Bright yellow. **Each 15c**

DECORATIVE DAHLIAS

AVALANCHE—Pure white, large full flowers of free flowering habit. Each 50c

BALLON—A very odd shade of bronzy apricot, suffused with gold; quite distinct. Each 35c

CHOWCHILLA—A bright, warm yellow; petals long and partly rolled; immense flowers. Each 35c

CHALLENGER (*English Decorative*)—The florets are broad and flat at base, but partly twisted cactus fashion at points. Color deep salmon overlaying yellow, but a peculiarly pretty rosy tint at tips adds to the beauty of the whole. Two first-class awards. Each 50c

DELICE—Lovely shade of pink, broad petaled flowers. Each 35c

DR. HENRY SEWELL—Combination of pinkish-fawn and golden-amber shades. Blooms large and handsome. Very early. Each 30c

BILLIE BURKE—An extra free flowering, soft yellow of extra large size. The long, flat petals are narrow and very numerous, forming a bloom of attractive formation. Each 50c

MINNIE BIRGLE—Bright rich red. Each 25c

GARIBALDI (*Holland Decorative*)—One of the best from Holland. A very full and very large flower with very fluffy petals on a good stem. Color is a bright scarlet. Particularly attractive. Each 50c

HORTULANUS WITTE—Very long stemmed. Pure glistening white. Each 50c

LATONA—Fine large flower of pretty pale yellow tinged buff and lavender. Freely produced on the stoutest, erect stems. This new Holland creation is sure to be in great demand very soon. Each 50c

POLAR STAR—The purest white Dahlia of remarkable beauty. Flower is large and full and carried on 18-inch stems. Each 75c

New—PRINCESS MARY (*Holland Paeony*)—Vivid light pink, margined blush. Very showy. Carries a mass of flowers on strong stems. Each \$1.00

SOUVENIR DE GUSTAVE DOAZON—Magnificent rich scarlet, often growing 9 inches in diameter; constant bloomer. Each 35c

MEADOW GOLD—Large primrose yellow, tinted light pink; very free on fine stems. Each 30c

PAEONY FLOWERED DAHLIAS

AUTUMN GOLD—Blending of bronze and buff. Large size; very free on good stems. Each 35c

DR. H. H. RUSBY—Immense yellow, shading to primrose tips; profuse bloomer. Each 35c

GEISHA—Golden yellow, changing to red and again to yellow tips. A sure bloomer and most popular. 8 to 10 inches across. Each 50c

HELEN LADD CORBETT—Beautiful, soft pinkish lavender of large size and perfect form. Long stems and very constant bloomer. Each 35c

KAKADEE—The Wonder from Scotland—Hybrid-paeony dahlia of the greatest merit. The color is a most beautiful lemon yellow, changing to almost white at the tips. A large attractive flower on very stout, erect stems. Plants are dwarf, needing no staking. Each 50c

LAURA (*English Paeony*)—Pale silvery rose. Very large flowers with broad twisted petals, on strong, erect stems. Each 75c

LIBERTY—A most magnificent, new shade of salmon-scarlet. English novelty of enormous size, produced freely and erect on long stems. By far one of the best for any purpose we have ever grown. Each 50c

LIEUT. ORVILLE A. STEVENS—New. A distinct shade of light orange-scarlet; blooms large, on good stems. Each 50c

MADAM VON BYSTEIN—A magnificent lilac lavender, changing to light blue. Each 50c

MAD. J. COISSARD—Lovely blending of white with carmine red. French variety of greatest merit. One of the most lasting and attractive for cut flowers. Each 35c

MRS. JACK GREEN—(*Paeony*)—A very large and full flower on a strong stem. Color a beautiful shade of rich scarlet. A California Dahlia that the originator may well be proud of. Each 75c

OREGON BEAUTY—Bright fiery scarlet with golden sheen. Free blooming. Each 35c

WHITE FLAG—Pure snow white. Large flowers on long stiff stems. Very free bloomer. Each 35c

VAN DYCK—Large graceful flower of lovely salmon pink with heliotrope suffusion. Each 50c

WADAWANNOCK—Bright coral red flower with broad, flat petals. A strong healthy grower with large flowers, good stems. Each 50c

AMPHION—Large mauve, pink flowers, with artistically curled and twisted petals. Each 50c

HI GILL—Golden yellow, reverse tinted bronze; Very large on long, strong stems. Each 50c

SHOW

W. W. RAWSON—Pure white overlaid with amethyst blue. Each 35c

DREER'S WHITE—A magnificent white of largest size, great purity, long stems. Each 35c

A. D. LIVONI—This grand old variety still remains the best pink of its type. Each 25c

MRS. ROOSEVELT—Delicate silvery rose. Each 30c

GRAND DUCH. MARIE—Pleasing buff, overlaid orange; reverse tinted pink; fine, T.e.g.c. Each 30c

ROBERT MANTELL—New. Deep crimson-maroon. Each 50c

DREER'S YELLOW—Very large blooms; resembles Dreer's White, except color. Each 50c



GLADIOLI



EXQUISITE coloring, vigor, ease of cultivation and freedom from insect pests and diseases are making Gladioli universal favorites that should have a place in every garden. They come into bloom at a season when there are few other flowers.

CULTURE—Gladioli may be planted as early as the ground can be worked or as late as June. A sunny situation is preferred. Plant to a depth of 3 to 6 inches, depending on the size of the bulb. Largest bulbs are not always best, as some varieties do not produce large bulbs. Any garden soil will give satisfactory results, but if well enriched, cultivated and freely watered when bulbs first show, Gladioli will amply repay you for this additional care. If cut when the first bud opens and put in water, the flowers will open perfectly, keep for many days, and colorings is richer and more delicate than if left to open on plant.

Beautiful New Gladioli

Prices F. O. B. Portland; if mailed, postage extra

AMERICA—Exquisite shade of flesh pink-tinted lavender. Each 5c, doz. 50c, 100 \$3.50

AURORA—Fine scarlet, very early, the earliest of all scarlets. Each 15c, doz. \$1.50

BARON HULOT—A brilliant indigo blue, free flowering and very attractive.

Each 10c, doz. 90c

BLUE JAY—A true blue of great beauty, lighter in color and a larger, more attractive flower than Baron Hulot. A rare novelty.

Each 35c, doz. \$4.00

BUTTERFLY—Very strong and vigorous grower. Large, pale salmon yellow ruffled flowers. New.

Each 25c, doz. \$2.50

BRIMSTONE—Light sulphurish yellow, extra large, new

Each 75c, doz. \$7.50

CHICAGO WHITE—Pure white, with lavender markings in throat.

Each 15c, doz. \$1.50

DREAM—Large, massive bloom. Deep salmon red. Large, very showy blotches. Extra grand. New.

Each 75c, doz. \$7.50

FAIRLAND—Large well expanded flower on tall spike. Vermillion scarlet, lighter toward center. Lower petals very beautifully blotched. Finest shade of deep red. Extra fine.

Each 75c, doz. \$7.50

GLORY OF HOLLAND—White with inner throat slightly marked red, sometimes tinged delicate pink.

Each 10c, doz. \$1.00

GOLDEN WEST—Bright orange red, with a few darker stripes. A fine flower. New.

Each 15c, doz. \$1.50

HALLEY—Salmon pink with creamy white blotch. Large flower and early bloomer.

Each 5c, doz. 50c

INDEPENDENCE—Light flame scarlet with dark red throat; long spike, early.

Each 15c, doz. \$1.50

LILY LEHMAN—Brilliant light pink shading to bluish white. Flowers resemble a lily. One of the best sorts.

Each 20c, doz. \$2.00

LE MARECHAL FOCH—A giant plant and flower. Bright pink. One of the finest. New.

Each \$1.00, doz. \$10.00

MRS. FRANCIS KING—Pleasing light scarlet: fine for forcing.

Each 6c, doz. 60c, 100 \$3.50

MRS. FRANK PENDLETON—A clear brilliant salmon pink with bright blood-red blotch in throat on lower petal. A superb flower of largest size.

Each 15c, doz. \$1.50

MRS. WATTS—Glowing American Beauty shade, a royal red rose color, very beautiful.

Each 15c, doz. \$1.50

MYRTLE—A very fine pink, blending into deeper pink. A beauty. New. Ea. 75c, doz. \$7.50

NIAGARA—Lovely deep cream, shading to a canary yellow on the two lower inside petals. The giant flowers open freely, has broad dark green foliage.

Each 15c, doz. \$1.50

PRESIDENT TAFT—Large pink, red blotch on lower petals.

Each 10c, doz. \$1.00

PRINCE OF WALES—Lovely shade of Salmon pink and coral. Very fine.

Each 15c, doz. \$1.50

PANAMA—A new seedling of America, identical except in color, which is much deeper pink. Spike long and the large flowers are well arranged.

Each 15c, doz. \$1.25

PEACE—Large flowers of good form: almost pure white: strong grower

Each 15c, doz. \$1.50

PINK PERFECTION—Clear, soft pink. The large graceful flowers bloom freely. Most wonderful pink ever introduced.

Each 15c, doz. \$1.50

PRINCIPINE—An intense scarlet, with white throat.

Each 10c, doz. \$1.00

GLADIOLI—Continued

PRIDE OF LANCASTER—A brilliant orange salmon. Rich, fiery, deeper orange throat. Tall large, massive bloom. Plenty open. A beautiful ruffled variety. New. Each 75c, doz. \$7.50

PRIDE OF HILLEGOM—Very fine scarlet. Large flowers. New. Each 25c, \$2.50 doz.

RED, WHITE AND GOLD—A giant in plant and foliage, with a massive spike and good sized flowers. Upper portion of bloom pure white. Lower petals entirely of a rich lemon yellow clear to the edge, with a beautiful pekargonium-like blotch of richest red on each. New. Each 75c, doz. \$7.50

SCHWABEN—Soft pure yellow, little red stripe on lower petals. New. Each 20c, doz. \$2.00

WAR—A deep, rich, velvety crimson self color. Many consider "War" the most striking Gladiolus ever produced. Our stock is extra fine, and everyone should plant them. Each 15c, doz. \$1.50

WILBRINK—Large flower. Early bloomer. A lovely pink. New. Each 15c, doz. \$1.50

WILLIE WIGMAN—Creamy white with red throat, large. Each 10c, doz. \$1.00

YOUELL'S FAVORITE—A large flower and plant. Striking rosy lavender pink. Conspicuous and fine. It is all its name signifies. New. Each 35c, doz. \$3.50

DIAMOND MIXTURE—Select named varieties with choicest Childsi Hybrids. Each 7c, doz. 75c, 100 \$5.00

GLADIOLI, FINE MIXED—A large variety of fine flowers unequalled for the price. Each 5c, doz. 50c, 100 \$3.00

PRIMULINUS HYBRIDS—A beautiful new race of Gladioli; dainty and graceful flowers in various brilliant shades. Each 10c, doz. \$1.00

CANNAS



CANNAS require a rich, moist soil and should not be planted until all danger of frost is past. They are quick growers and the new flowering sorts bloom continuously until frost. Inexpensive, these charming ornamental plants produce rich tropical effects that cannot be excelled, and the varieties offered are equally valuable for the beauty of their bloom.

PRICES, except where noted: Bulbs or plants in season, each 30c; dozen \$3.00, not postpaid

FIREBIRD—New. Considered the best red-flowered, green-leaved Canna. Flowers are fiery, bright red, borne in immense trusses. Height 4 feet.

KING HUMBERT—The mammoth flowers are a brilliant orange-scarlet, with bright red markings, foliage is broad and of a rich coppery bronze with brownish green markings; 5 to 6 feet.

MAID OF ORLEANS—Large flowers of rich cream color, shaded and mottled with pink. Bronze markings on the soft olive-green foliage make this variety one of the most attractive among the green-leaved sorts. 4½ feet.

CITY OF PORTLAND—A magnificent "Test out" pink with salmon suffusion. Luxuriant green foliage, very vigorous and hardy.

Each 35c, doz. \$3.50

WINTZER'S COLOSSAL—Without doubt the largest flowering Canna, the blooms measuring 8 inches across. Flowers are an intense vivid scarlet of the orchid flowering type. Foliage green; 5 to 6 feet.

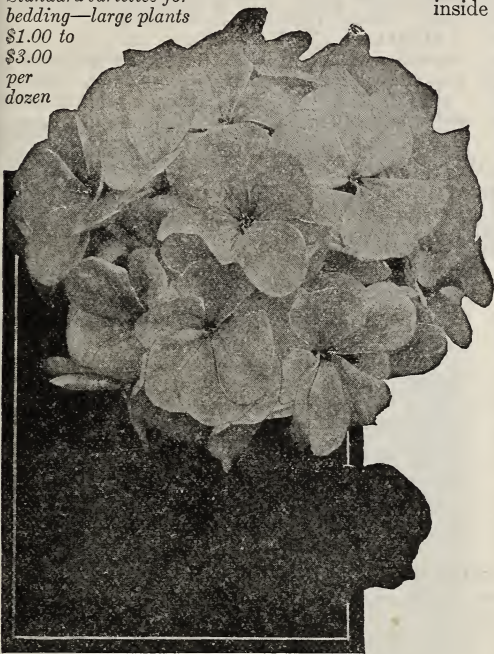
YELLOW KING HUMBERT—Identical with King Humbert in habit of growth. Beautiful yellow flowers dotted with red. Foliage green. Height 5 feet.



GERANIUMS

GERANIUMS are undoubtedly the most popular bedding plant of the time. Their free rapid growth and continuous blooming qualities keep them in the front rank among the long list of bedding plants. Beds of one color or variety have been very popular of late years, being very effective in all garden efforts, and for Winter flowers inside nothing is more satisfactory. They are of the easiest culture, requiring to be kept cool and given plenty of air, with an occasional sprinkling of the foliage to clean and freshen it. Keep the roots moist, not too wet, and have good drainage in the pots. No other flower can take their place as bed or border plant, and inside they grow beautifully throughout the year, making cheery house plants.

Standard varieties for bedding—large plants \$1.00 to \$3.00 per dozen



Our list of varieties include a number of rarely beautiful novelties as well as the very best standard sorts, and prices are so low as to place them within reach of everyone.

Rare Novelties—Single Geraniums

Price 20c each, set of 8 sorts \$1.40

FREDERICK PLESSIS—Large trusses of well rounded florets. Color light scarlet shaded to large, white center, very striking.

JEAN LIONETT—Grand trusses on stout, heavy flower stalks. Color reddish purple, each floret maculated with orange in the center. Very distinct and beautiful.

LUCILE HILL—Long upright stems; large trusses of the beautiful ruffled form; perfectly circular florets of largest size; rich salmon shaded with rose, an excellent grower.

MARQUIS DE LONQUEIL—Rich geranium red shaded to light carmine with very large white center. Large trusses on fine strong stems.

ALBION—Beautiful free flowering white variety as pure as driven snow. Always in bloom.

Twelve Fine Single Geraniums

Price 15c each; set of 12 sorts \$1.50

C. W. WARD—Rich salmon shaded to orange, magnificent zoned foliage.

EUGENE SUE—Odd shade of russet orange, very distinct.

JACQUERIE—Rich, vivid crimson, immense trusses.

MAXINE KAVOLENSKI—Odd shade of orange red; very distinctive, splendid bedder, vigorous, handsome; a dependable sort.

MADAME CHAPOTAN—Delicate light pink flowers in very large trusses; handsomely zoned foliage.

MRS. J. M. GARR—A grand single white, plants a mass of white bloom, trusses of the grandest size, florets extra large and of the purest white.

MADAME MOSNAY—Peculiar shade of carmine-lake, shaded to violet and white. Very distinct and striking.

METEOR—Brilliant crimson maroon. A magnificent bedding variety.

MILDRED RIVAL—Pure rose pink, with conspicuous white blotch on two upper petals.

MRS. A. BLANC—Silvery salmon shaded to peach; one of the richest colored sorts.

MRS. E. G. HILL—Very large trusses of single florets; color clear salmon, with a white center.

NUIT POITEVINE—Trusses and florets of grand size; rich, rosy violet; the upper petals feathered with scarlet at their base. Very distinct and much admired.



Rare Novelties—Double Geraniums

Price 20c each, set of 8 sorts \$1.40

BLANCAFLEUR—Fine new double white with flowers of wonderful purity of color. Sturdy growing and free blooming.

DR. PHILLIPE TISSIE—Robust grower; large trusses born on long stems light crimson, shaded through magneta to grand white center.

E. H. TREGO—Rich crimson scarlet flowers in grand trusses all summer long. A grand bedding variety.

EUGENE CARRIER—Enormous semi-double florets of rich copper color shaded salmon-rose. Robust growth, trusses immense in size.

ERNEST CHEBROUX—Very large trusses of rich bright cerise colored flowers, each floret with large distinct white eye.

ELECTRE—Rich, deep cerise shaded vinous rose, upper petals dashed with white at their base. Dwarf, charming for bedding.

MADAME TURIN—Plant vigorous, free blooming with very large trusses of wide florets; ground color pure white, rosy salmon center.

VIRGINIA—Delicate daybreak-pink shaded dainty-rose with large white center. Large trusses on strong stalks. Very beautiful.

Twelve Fine Double Geraniums

Price 15c each; set of 12 sorts \$1.50

ALPHONSE RICARD—Immense trusses of large round flowers of the most vivid scarlet.

BEAUTE POITEVINE—Very large, semi-double flowers of a brilliant salmon color. One of our best sorts.

CONTRASTE—Rich shade of crimson-lake of velvety appearance. Nice dwarf growth and beautiful foliage.

EDMOND BLANC—Large trusses of rich purplish violet flowers borne in greatest freedom. One of the finest dark colored sorts.

GOLDEN DAWN—Bright orange scarlet shaded to yellow. Fine large trusses of bloom. Very distinct.

MME. BARNEY—A splendid deep pure pink, of a lively shade and grand habit of growth; dwarf and branching.

MADAME LANDRY—Distinct salmon pink lightly shaded scarlet. Magnificent trusses.

MME. RECAMIER—Snow white; strong vigorous grower; flowers abundantly produced in large trusses.

MRS. LAWRENCE—Beautiful satiny pink shaded to white; a gem among geraniums.

S. A. NUTT—The best of the rich, dark crimson varieties; trusses massive.

SCARLET BEDDER—Bright scarlet flowers in large trusses holding color well in the hottest weather. Never out of bloom. Nice dwarf grower with handsome foliage. One of the best.

THOMAS MEEHAN—Bright vinous-rose color, upper petals heavily marked with orange. A rare new color among Geraniums. Wonderfully free in bloom.

Ivy Leaved or Trailing Geraniums

These are unexcelled as basket or window-box plants, as well as being useful in bedding, covering the ground quickly with their deep green, ivy-shaped leaves and brilliant colored flowers.

Price 20c each; set of 6 sorts \$1.00

BALLADE—Large double flowers of a tender lilac color, feathered with crimson.

GARDEN GLORY—Brilliant scarlet, upper petals veined crimson; rich and attractive.

CHARLES TURNER—Brilliant pink, approaching scarlet. Upper petals nicely feathered maroon. Large trusses. Best of all ivy geraniums.

COLONEL BADEN POWELL—The nearest approach to a pure white variety in this class of geraniums. Fine large trusses.

INCOMPARABLE—Exquisite shade of rosy-carmine, sturdy growing and free blooming.

MADAME THIBAUT—Beautiful shade of soft rose pink, upper petals delicately feathered with crimson maroon; undulated petals, immense trusses, luxuriant waxy foliage.

Pelargoniums—Lady Washington Geraniums

Price 25c each; set of 6 sorts \$1.25

BRIDEGROOM—Silvery rose veined crimson, with dark purplish maroon blotches on upper petals. A wonderful bloomer.

DUCHESS OF PORTLAND—Large round flowers vinous cerise shaded to vermillion. Upper petals darkly blotched and veined.

EASTER GREETING—Remarkable for its free blooming proclivities, equally as fine bedder as a pot plant. The flowers a fiery amaranth red, petals distinctly blotched, maroon.

FAIR MAID—Lower petals white flushed light pink; upper petals blackish maroon surrounded with crimson and bordered white.

LINDA—Bold flowers of clear salmon pink, feathered maroon on upper petals. One of our finest sorts.

LORD CARRINGTON—Very large round flowers: crimson maroon surrounded with purplish rose. Large white center. Very distinct.

New Heliotropes

Price 15c each; set of 4, 50c, postpaid

ALBATROSS—Elegant dwarf, bushy growing new variety of great merit; large panicles of pure white flowers in great profusion all season; the best white variety to date.

HEAVENLY BLUE—Large, close panicles of exquisite light blue flowers, with a white eye. Grows vigorously and flowers abundantly.

LAVENDER QUEEN—Enormous florets, very large trusses of bloom; color, a beautiful shade of lavender, suffused with rosy mauve. A dwarf robust grower, free continuous bloomer.

ROYAL PURPLE—Very large and fragrant; color deep violet purple, with white eye; very floriferous; highly recommended for bedding. \$1.00 per dozen.

Choice Novelties in Carnations

CARNATIONS will thrive in any good fresh garden soil. After danger of frost is over, set 10 to 12 inches apart each way, cultivate and water as needed until they begin blooming, then mulch with light manure that has straw in it; plants should be staked or strung to support them. Carnations are easily grown in the house for winter flowers.

Price 25c each, set of 6 sorts \$1.25

"American Carnation Culture" Lamborn
\$2.00 Postpaid.



BELLE WASHBURN—Very large bright scarlet flowers finely fringed and very fragrant. Free blooming, sturdy branching grower. Believed to be the finest scarlet sort yet produced.


LADDIE—Very large, heavily fringed flowers with exquisite fragrance. Color pure rose-pink with silvery shadings. Rank growing variety with long straight stems and leathery blue-green foliage. A superb new American seedling.

MATCHLESS—A wonderful new white variety produced by a famous hybridizer of New York State. Large, massive flowers on strong upright stems. Sweetly perfumed.

POCAHONTAS—A grand new ever-blooming carnation, producing very large flowers of a rich crimson maroon color. Its rich, velvety color is immensely popular.

ROSALIA—Large, handsome, well built flowers of a rich shade of deep pink, tinted with carmine. Remarkably free in bloom for such a large flowered sort.

RUTH BAUR—A beautiful new everblooming carnation of robust erect growth. Silvery rose-pink in color so greatly admired in this class of plants.

 Field Grown Carnations for Forcing—for Delivery in Season

Standard Everblooming Carnations

Price 20c each, set of 10 fine varieties \$1.50 postpaid

ALICE—Large nicely fringed, well formed flowers on stout stems. Colors light pink with silvery shadings. One of the best sorts we have.

AVIATOR—Flowers very large and massive with finely fringed petals and strong calyx. Stems long and very stout; color bright rich scarlet. A true everbloomer.

BEACON—A bright, deep scarlet; a most perfect color, soft yet brilliant; the flower is of the largest size and perfectly double; nicely fringed; sweet.

BONORA—A beauty; fancy variety of fine size and form, borne on long, stout stems. Color white flaked and splashed with red.

ENCHANTRESS—Flowers very large, borne on long stems. The color is a superb shade of flesh pink. An early and continuous bloomer.

HARLOWARDEN—Rich crimson-maroon flowers of fine size and build. Rarely beautiful variety.

MRS. C. W. WARD—Simply superb, both in form and color; brilliant dark pink, of immense size.

MRS. C. ROPER—Greatly admired for its beautiful soft rose-pink flowers. Very delicate and pretty.

WHITE WONDER—Snow white flowers, produced on strong wiry stems. Nicely fluted and very fragrant.

WHITE ENCHANTRESS—A pure white sport from the famous variety Enchantress, having the same general habit and characteristics.

Florists' Supplies

We carry a complete line of high-grade stocks at prices so reasonable that you cannot afford to "Go East" for them. Write us your requirements or send in a trial order.

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG



Rare New Japanese Chrysanthemums

Price 20c each, set of 10 sorts \$1.50 postpaid



BETSY ROSS—Globe shaped blooms of grand size and exquisite finish produced freely during October. Color pure snow-white without the least shading. Superb new American variety.

BOL D'OR—Magnificent flowers of the very largest size, forming a perfect sphere. Color rich golden yellow. A fine exhibition variety as well as a good decorative garden variety.

CRYSTAL GEM—A beautiful new white variety producing its magnificent blooms in much profusion very early in the fall. A glorious decorative variety.

GLENVIEW—Fine large Japanese incurved variety, producing freely its rich bronze colored flowers. Sometimes shaded and streaked with indian-red.

LIBERTY BOND—Broad incurved petals of wonderful substance unfolding into a magnificent pure white globe eight inches in diameter. The finest white sort we have yet had for cut flowers.

MANCATO—Enormous exhibition bloom full to the center. Petals tubular, pointed, twisting and curling in fantastic fashion. Color, rosy purple with silvery shadings.

MIDNIGHT SUN—Great globes of golden yellow flowers fully eight inches in diameter when well grown. A first class exhibition flower.

MRS. B. E. HAYWARD—Rich bright pink blooms of the best incurved form. Fine robust growing and free blooming.

TINTS OF GOLD—Bright yellow tinted with bronze. Handsome incurved bloom of great substance and keeping qualities.

W. H. WAITE—Immense full flowers of finest incurved form on stout stems. Color rich golden bronze, shaded with terra-cotta. A wonderful piece of coloring.

Twelve Finest Exhibition Chrysanthemums

Price 15c each, set of 12 sorts \$1.50 postpaid

CHARLES RASER—Elegant snow-white incurved blooms of fine size and build. Comes on long stout stems grandly clothed with luxuriant foliage.

CHIEFTAIN—Very large and perfectly incurved flowers of a beautiful silvery pink color.

CHRYSOLORA—In our field trials during the past season this variety stood out preeminently as the finest yellow in the collections. Large incurved flowers of elegant form.

DR. ENGUEHARD—Flowers delicate pearl-pink: large, beautifully incurved: very double and of exquisite form.

GOLDEN EAGLE—Large golden-yellow flowers of the finest incurved form; petals of great substance tubular or rounded and folding towards the center in elegant manner.

GREYSTONE—Fine large incurved broad petaled blooms of a beautiful shade of chamois bronze. Very distinct new color and much admired.

HARVARD—The darkest chrysanthemum extant; when well grown it produces a good medium sized bloom of the darkest shade of crimson.

MAJOR BONNAFFON—Soft, clear yellow, full in the center, eight inches in diameter and nearly as deep; perfect form.

MARIGOLD—A giant in growth and bloom. Luxuriant green foliage clothing its heavy stems each crowned with a gorgeous orange yellow flower of the finest incurved form.

MRS. H. W. BUCKBEE—Perfectly incurved globe shaped pure white flowers full to the center. Fine strong grower and free bloomer.

WILLIAM TURNER—Pure white in color, and we have never seen anything larger or more impressive for the exhibition table.

WHITE CHIEFTAIN—Compact incurved flowers of elegant form and nice size; pure white tinged with pearl. A popular cut flower sort with florists.

Six Beautiful Flowering Begonias

Price 20c each, set of 6 sorts \$1.00 postpaid.

BERTHA CHATEROCHER—Glossy green foliage covered nearly the year round with clusters of bright scarlet flowers.

COMPTA—Pointed purplish-green leaves with silvery shadings. Pure white flowers.

ARGENTEA GUTTATA—Handsome erect growing sort, with pointed wine-colored leaves with silvery white spots; clusters of pure white flowers on the tips of the stems.

FOLIOSA—The freest-flowering Begonia we have. Makes a handsome window plant, with its glossy green leaves and bright pink flowers.

NITIDA ALBA—Waxy dark green ovate leaves and graceful pure white flowers.

PRESIDENT CARNOT—Very large green leaves with purplish cast on reverse sides. Large pendant clusters of light scarlet flowers.

REX BEGONIA—Grown for the beauty of their foliage. The leaves are large, variegated and margined with a peculiar silver-metallic gloss.

Price choice plants each 25c



Rex Begonia

Free Blooming Fuchsias

Price 15c each, set of 6 sorts 75c

ANNIE EARLE—Tube and sepals waxy white; corolla single, clear carmine; plant of splendid and free blooming habit.

GENERAL ROBERTS—Flowers very large, corolla plum color; tube and sepals crimson; one of the finest varieties.

MOLESWORTH—Fine, large and elegant form, sepals long and reflexed, pure red; corolla large double white.

SPECIOSA—A winter blooming variety producing very long, narrow flowers, tube and sepals bluish-pink, corolla bright carmine.

STORM KING—Superb double white variety well known to all plant lovers.

TRAILING QUEEN—Tube and sepals rosy-scarlet, corolla violet purple. Of trailing habit of growth, fine for baskets and window boxes.

Bedding Lantanas

A fine class of Summer blooming bedding plants also known as shrubby Verbenas. They vie with the Geraniums and Cannas in their brilliancy of colors during the Summer season.

Price 15c each, set of 6 sorts 75c

CORBEILLE D'ARGENT—Lovely pure white variety, dwarf and compact.

IOLANDE—Beautiful umbels of showy flowers in shades of crimson, orange and yellow.

LEO DEX—Bronzy-red and crimson-violet, very striking.

LYRE—White with clear yellow centers, dwarf.

RED AND GOLD—Dwarf grower. Yellow and orange in center, deep crimson towards edge of umbels. This fine variety has been featured strongly at our Rose Festivals.

WEeping LANTANA—Of trailing habit making it also desirable for baskets and boxes. Lavender colored flowers all Summer long.

Popular Annual Bedding Plants

Annual bedding plants are so inexpensive and satisfactory that they should be planted extensively for cut flowers in the home as well as for garden effects. They also make splendid displays in tubs and porch boxes. See page 70.

Mulford Cultures *For Alfalfas and Clovers* see page 45. *Insures a stand, increases the yield, improves the soil.*

GLADIOLI make splendid and attractive displays planted in the foreground of shrubbery—in groups on the lawn—in the perennial border or in combination with geraniums or cannas—and once planted will increase and bloom from year to year with very little attention.

Plant Annuals in the bulb beds. After the bulbs are through blooming they should be allowed to grow until late summer and the beds can be made very attractive with annual flowering plants without disturbing the bulbs. Forget-me-nots, Petunias, Pinks, Poppies, Verbenas and Candytuft are among the best.



WE OFFER a splendid list of Ferns, including some of the newest varieties as well as the older sorts. Florists wishing stock of the new varieties, write for prices.

ORNAMENTAL FERNS

Price, small plants, 30c; postpaid, from 4 in. pots, 75c; 5 in. \$1.50, postpaid.
Specimen plants, \$1.50 to \$3.00, F. O. B. Portland.

BOSTON FERN—This is the original and well known type of "Sword Fern."

TEDDY JUNIOR—New Dwarf Fern. A sport from the famous Roosevelt Fern. Compact in form, and a rapid grower, producing about four times as many fronds as any other fern.

N. ROOSEVELT—Resembles Boston Fern, produces more fronds, making a bushier and a wonderfully decorative window plant.

OSTRICH PLUME FERN—(*Nephrolepis Whitmani*)—Beautiful new sport from the well known Boston Fern.

ASPARAGUS FERNS

SPRENGERI—(*Emerald Feather*)—This is undoubtedly one of the handsomest and most valuable evergreen trailing plants for the house and conservatory ever introduced. Beautiful sprays of lovely green feathery foliage. It makes a charming ornamental plant for the window or conservatory in Winter. 20c each, postpaid; large plants by express, 35c and 50c each.

PLUMOSA—(*Japanese Lace Fern*)—A finer and more delicate plant than the Sprengeri, but hardy and easily grown. Very satisfactory for window and house culture. An extremely graceful window climber, bright green feathery foliage, as fine as the finest silk or lace. No finer house plant than this. 20c each, postpaid; large plants by express, 50c and 75c each.

SPECIAL—Six Fine Table Ferns for \$1.25

Price 25c each; 6 sorts for \$1.25. Extra large plants, 40c each, postpaid.

ADIANTUM CUNATEUM—(*Maiden Hair Fern*)—A very beautiful and graceful fern.

ASPIDIUM TSUSSIMENSE—Valuable for fern dishes; of dwarf graceful habit.

PTERIS ARGYREA—(*The Silver Fern*)—Beautiful variegated leaves; silvery white on a light green ground.

CYRTOMIUM FALCATUM—(*The Holly leaved fern*)—Hardy, dark green foliage.

PTERIS CRETICA ALBO LINEATA—A pretty and useful variegated variety.

PTERIS WILSONI—A very pretty and useful fern. Green leaves with the ends very peculiarly crested. Beautiful sort for fern dishes.

SWEET VIOLETS

Price each 20c; 6 sorts, \$1.00, Postpaid.

SINGLE

BARONESS ROTHSCHILD—Similar to Princess of Wales, but blooms more freely.

CALIFORNIA—Very showy flowers of enormous size, deep violet blue, deliciously fragrant.

PRINCESS OF WALES—Gigantic flowers, of a very rich shade of blue, extremely fragrant.

DOUBLE

LADY HUME CAMPBELL—Beautiful light blue, very free-blooming, exquisitely fragrant.

MARIE LOUISE—A constant bloomer, producing large flowers, lovely deep violet purple.

SWANLEY WHITE—The finest and best double white violet in cultivation.

BEGONIAS—(*Tuberous Rooted*)—From their early first blooming until cut down by frost, Tuberous Begonias display a mass of most gorgeous and brilliant coloring. They are distinct and unique in wonderful shades of yellow bronze, white, reds, pinks, with thick waxy petals and grand ornamental foliage, never failing to excite the wonder and admiration of all who see them.

Each, 20c; doz. \$2.00

Oregon Giant Pansy Plants, 75c per dozen

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG



DIAMOND QUALITY ROSES are large, sturdy, two-year-old, field-grown roses that will give you splendid flowers the first season. They are true to name and our list includes the best of the well known popular varieties, the most meritorious of recent novelties and the Gold Medal roses of famous European growers.


PLANTING AND CARE

In our favored section, roses attain a perfection seldom equaled, but you cannot expect them to thrive and bloom unless you care for them. We offer the following simple suggestions:

SOIL—Any good, well-drained garden soil, enriched with fertilizer, will give excellent results. If heavy clay soil mulch well with burnt earth and manure, rotted sod or leaf mold.

FERTILIZER—Our odorless fertilizer, Bone Meal, Tankage of Blood, will give excellent results and should always be applied after the plants start their growth.

WATERING—When setting out, water regularly until roots are well set; then about once a week unless the ground is very dry; in such cases more often. Do not get the foliage wet after a hot day. This causes mildew.

 We offer a splendid assortment of popular roses and the best of the new ones, and can secure any variety in commerce, **TRUE TO NAME**.

FINALLY—Keep the surface well worked around the plants. This is as necessary as water or fertilizer. When planting cut back freely, and the bush will recover quickly.

SHIPPING—We always send all our two-year-old rose bushes charges collect by express or freight, packing them so they will carry safely even though they should be on the road for two weeks or more.

If necessary, we can send small two-year-old bushes by mail at an additional cost to cover postage, but in such cases we always prune the tops and roots ready for planting.

Rare New Garden and Exhibition Roses

Fine 2 year Dormant Plants, postpaid, \$1.00; \$10.00 per doz.

COLUMBIA—(H. T.)—One of the greatest of recent introductions. The color is a true pink, deepening as it opens to a glowing pink. A striking peculiarity of this rose is that the shades all deepen as the rose opens. Single buds on long stems, splendid for cutting.

COUNTESS CLANWILLIAM—(H. T.)—A distinct and charming rose, producing flowers in great abundance. Color delicate peach pink, petals flamed and edged with deep cherry red. Long pointed buds opening to large full flowers. Of strong, vigorous habit.

CLEVELAND—Vigorous stout branching growth with very large and handsome foliage absolutely mildew-proof. Flowers of the very largest size, very full and beautifully formed. Remarkable for its finely shaped buds unfolding into a massive bloom of great substance. Color a new shade of old rose heavily flushed reddish copper with base of petals deep coppery yellow. The buds display a distinct metallic sheen entirely new to roses and charming in its originality.

TIPPERARY—Beautifully formed buds of a bright canary yellow, produced with great freedom. A fine new Irish rose with all the requisites of a good garden variety.

CONSTANCE—Rich orange yellow, distinctly streaked and splashed with crimson, long pointed buds.

GORGEOUS—Strong, vigorous growing, with handsome olive-green foliage. Flowers very large, finely formed, produced freely on stout canes. Color deep orange-yellow, heavily veined with reddish copper.

LOS ANGELES—Described by the originator as "A flame pink toned with coral and shaded gold at base of petals." Buds long, pointed and lasting. The flowers are very large and the beauty of coloring does not fade. Flowers profusely all season on strong shoots. The foliage is a rich, luxuriant glossy green. Two-year field-grown plants. Everyone should have Los Angeles.

LADY HILLINGDON—(T.)—Deep apricot yellow, long and pointed bud. Flowers are of good substance and very lasting. Foliage luxuriant. A fine forcing or garden rose, excellent for cutting.

RADIANCE RED—(Red Radiance)—A glowing crimson sport of Radiance with all the magnificent qualities of the parent; the enormous globular flowers on heavy canes are a sight to be long remembered.

Beautiful Roses of Recent Introduction

The following are the recent novelties and Gold Medal roses that have proven their merit and are now generally in great demand.

Fine 2-year Dormant Plants, postpaid, \$1.00; \$10.00 per doz.

CRIMSON EMBLEM—A superb new Irish rose of a rich and glorious crimson color heavily shaded maroon. Buds and flowers of superb form, of fine size and produced on fine long stems, admirably adapted for cutting. Wonderful mildew-proof foliage.

FRANZ DEEGAN—(H. T.)—This beautiful yellow is a fine grower, having the good habit of throwing up numerous heavy canes.

HOOSIER BEAUTY—Crimson scarlet with darker shadings, velvety texture. Bud long and pointed, deliciously fragrant.

KILLARNEY BRILLIANT—A sport from the well known Killarney, a more robust grower, producing fine, large, nice formed buds of a deep rich rose color, lightened towards edge of petals. A fine garden rose.

K OF K—(H. T.)—New. Intense scarlet known. Semi-single with huge petals. Free and continuous bloomer. Sweet scented.

LILLIAN MOORE—(H. T.)—Flowers large and full; pure Indian yellow with slightly deeper center. Buds long and pointed.

LOUISE CATHERINE BRESLAU—(H. T.)—Coral red, shaded chrome yellow, opening to a shrimp pink, shaded coppery orange.

MAD. EDOUARD HERRIOTT—The famous winner of the Daily Mail Prize. The color being terra cotta bronze and geranium red, a new combination of colors in rose.

MADAME MELANIE SOUPERT—(H. T.)—Splendid new orange yellow shaded pink; beautiful, long-pointed buds. Best of its color.

MAD. RAVARY—(H. T.)—Clear orange yellow. Long pointed buds; flowers of fine form.

MARQUIS DE SINETY—(H. T.)—Deep saffron yellow, flushed reddish copper. Flower large, beautiful dark foliage.

MELODY—(H. T.)—Intense deep saffron yellow with primrose edges. Blooms medium size, very fragrant and freely produced.

MRS. AARON WARD—(T.)—A deep golden orange color shading out to lemon or creamy yellow at the edge of the petals. One of the most beautiful roses in existence.

MRS. ALFRED TATE—(H. T.)—Coppery red shaded fawn. Buds are about the largest we have ever seen on an outdoor rose. Will easily rank with the very best.

MRS. CHARLES RUSSELL—(H. T.)—“American Beauty” can compete with it when it comes to counting points. Stems three feet long, stiff and surmounted by grand rosy-pink blooms.

A splendid gift Rose that your friends will appreciate.



Los Angeles

OLD GOLD—(H. T.)—Medium sized flowers of a vivid reddish orange color with coppery red and coppery apricot shadings. A splendid garden rose.

OPHELIA—(H. T.)—Orange salmon buds, opening to flowers of dainty pink. The foliage is clean, dark and leathery—growth vigorous and free, producing long canes. Blooms early and continuously.

RAYON D'OR—(Pern)—Long pointed buds of deep orange-cadmium smeared claret opening to a rich sunflower yellow. Foliage is deep, glossy green; and free from mildew.

RED LETTER DAY—Brilliant glowing crimson scarlet, opening into medium-sized cactus-shaped flower of curious formation. One of the freest blooming roses extant.

SUNBURST—(H. T.)—The finest of all yellow roses with long pointed buds. Color a superb cadmium yellow with orange yellow center. The foliage is a handsome bronze green.

GRAND GARDEN ROSES

In this list you will find many famous prize winners and some of the most beautiful and popular roses
Two year old plants, postpaid, 75c each; \$8.00 per doz.



ADMIRAL WARD—(H. T.)—A fine bedding variety of vigorous growth and erect branching habit. Spherical blackish red bud opening to large, full, globular flowers of crimson red with shadings of fiery red and velvety purple.

BETTY—(H. T.)—Beautiful coppery rose color, overspread with golden yellow. Fragrant.

BRITISH QUEEN—(H. T.)—Pure white, large, full flowers, opening freely. One of the best white roses for bedding and cutting.

DEAN HOLE—(H. T.)—Beautiful silvery carmine, shaded bright golden pink. Free bloomer.

DOROTHY PAGE ROBERTS—(H. T.)—Coppery pink, suffused with apricot yellow, very free and perpetual, a delightful garden rose.

EDWARD MAWLEY—(H. T.)—Long pointed buds of deep, rich, velvety crimson. Growth is upright and branching with handsome foliage. One of the finest red roses.

HADLEY—A fine American pedigreed rose producing flowers of elegant form and substance. Color rich crimson scarlet shaded maroon. A glorious rose.

HARRY KIRK—(H. T.)—Deep sulphur-yellow passing to a lighter shade at the edge of petals. Robust growth; free branching habit.

LADY ROBERTS—Rich apricot yellow, base of petals coppery red shaded with orange. Nice long sharply pointed buds developing into well formed open flower. A pure bred tea-rose of great merit.

LADY ALICE STANLEY—(H. T.)—Large full flowers of lovely, deep coral, inside pale flesh. A free grower and a profuse bloomer.

LADY ASHTOWN—(H. T.)—One of the finest pinks of a rich, deep, silvery tone; flowers large.

LYON—(Pernetiana)—Beautiful shrimp pink with salmon and chrome yellow shadings. Large coral red buds, beautifully formed. A continuous and free bloomer.

MARGARET DICKSON HAMILL—Delicate straw color, its shell-like petals flushed at the edges on the reverse side with delicate carmine-rose. Strong in growth, free blooming and exquisitely fragrant. Bronzy green foliage on deep crimson leaf-stalks. Very distinct and a gem among new roses. **Each \$1.00**

MILDRED GRANT—(H. T.)—Silvery white flushed delicate pink. By far the largest variety in the H. T. class, and easily the largest rose of good form. In spite of their great size and weight, the flowers are borne perfectly erect, as stems are amply stiff and strong. There is nothing coarse about it as with some large kinds.

MRS. ARTHUR WADDELL—A strong rampant-growing Hybrid Tea Rose, with foliage that is ornamental in itself. Large, long pointed buds of a bright rosy scarlet opening into a finely formed flower of a rich apricot or salmon color.

PAPA GONTIER—(T.)—A vivid cherry red color, shaded yellow, reverse of petals crimson.

PRESIDENT W. R. SMITH—A superb new rose of American origin, producing elegant-shaped buds and open flowers. Of an exquisite silvery pink color and sweetly perfumed. Large handsome leathery foliage, on stout thornless canes, each surmounted by a handsome flower. A grand variety for the garden.

RHEA REID—(H. T.)—Flowers large and double; rich dark velvety red; a good red garden rose.

RICHMOND—(H. T.)—Vivid red buds and flowers of the most perfect and desirable form.

WHITE LA FRANCE—(H. T.)—This magnificent rose is a pure white La France, having just a breath of rose-tinted blush.

SOUV DE STELLA GRAY—Long pointed buds of rich golden yellow, dashed with crimson at base of petals. Flowers produced on long stout stems. A beautiful fancy exhibition rose, shown in fine form at the Portland Rose Show on several occasions. **Each \$1.00**

FAVORITE GARDEN AND EXHIBITION ROSES

A choice collection of the best standard varieties, "tried and true," sure to give satisfaction.

Two year field grown plants, postpaid, 65c; doz. \$7.00.

CHATEAU DES CLOS VOUGEAT—Deep velvety crimson shaded with blackish maroon. The nearest approach to a black rose. As if cut from so much velvet, the most wonderful rose in color and texture. A true everblooming variety.

ETOILE DE FRANCE—This famous French Rose probably needs no extended description, for it is already quite well and favorably known. Flowers globular, very full and lasting, borne on stiff stems, well above the foliage. Color, deep velvety crimson of much richness and brilliancy. Remarkable for its strong growth and free blooming qualities.

FLORENCE PEMBERTON—(H. T.)—Creamy white, suffused pink. Very large and full.

GENERAL McARTHUR—(H. T.)—Dazzling crimson scarlet; delicious perfume and magnificent foliage. Blooms in great profusion.

GEORGE DICKSON—Very large, full and perfectly formed flowers freely produced. Color, blackish crimson of velvety texture, reverse of petals heavily veined with crimson maroon. A magnificent rose, invaluable for exhibition.

GRUS AN TEPLITZ or VIRGINIA R. COXE—(H. T.)—Color fiery crimson, with a dark velvety sheen, very fragrant. Free blooming. **Each 60c**

J. B. CLARKE—New Irish variety of great merit either for garden decoration or for cut flowers. The color is bright crimson shaded maroon; petals large, well-shaped and of immense substance; flowers very full and perfectly formed. Growth vigorous and tree-branching habit; flowering freely and continuously from early Summer until late Autumn.

JOSEPH HILL—(H. T.)—Salmon pink shaded yellow. Outside petals yellow suffused copper.

JULIET—(H. P.)—A wonderful combination of old gold on the outside of petals and a rich rosy red on the inside. Flower large, full and delightfully scented.

KAISERIN AUG. VICTORIA—(H. T.)—Elegant, large pointed buds; large, full double flowers; color delicate creamy white; fragrant.

LA FRANCE—(H. T.)—A silvery rose, changing to pink. A general favorite. Sweetest of all roses.

MAMAN COCHET—(T.)—Color is a deep rosy pink, the inner side of the petals silvery rose.

VISCOUNTESS FOLKSTONE—Flowers borne on strong stems, with thick foliage; color delicately tinted flesh, almost white, with beautiful satin finish; one of the most beautiful varieties in cultivation; should be in every collection.

WHITE MAMAN COCHET—(T.)—Immense size, exquisitely fragrant; long, pointed buds.

WINNIE DAVIS—Fine apricot pink shading to the flesh tint at base of petals. A grand hardy garden rose.



Ophelia

BABY RAMBLER OR DWARF POLYANTHUS ROSES

Two year old plants, not prepaid, 75c each

BABY RAMBLER—(Dwarf Bush Type)—Not over 18 inches high, producing large trusses of light crimson flowers; clean dark green foliage.

CECILE BRUNNER—Bright, rose, yellowish in center; very sweet; dwarf polyanthus.

PINK BABY RAMBLER—(Mrs. W. Cut-bush)—Clusters of pretty double bright pink flowers; freely produced in panicles; always in bloom.

FINEST HARDY PERPETUAL ROSES

FOR Eastern Oregon and Washington or in sections where the winters are severe, this collection will thrive and bloom freely where the Tea and Hybrid Tea roses would not prove satisfactory.

Two year old plants, postpaid, 60c each; \$6.00 per doz.

AMERICAN BEAUTY—(H. P.)—One of the largest, sweetest and best; rich, rosy crimson, shaded and veined in a most charming manner.

Each 50c

BARONESS ROTHSCHILD—(H. P.)—Flowers of immense size; color bright rosy pink.

Each 50c

CONRAD F. MEYER—A most valuable addition to the list of hardy free-blooming roses. The color is a beautiful pure silvery pink.

Each 50c

DUCHESS OF WELLINGTON—(H. P.)—Intense saffron yellow stained with rich crimson which as the flower develops, become deep coppery saffron yellow. Delightfully fragrant.

Each \$1.00

FRAU KARL DRUSCHKI—(H. P.)—The white American Beauty. Makes splendid buds and immense flowers; perfectly double.

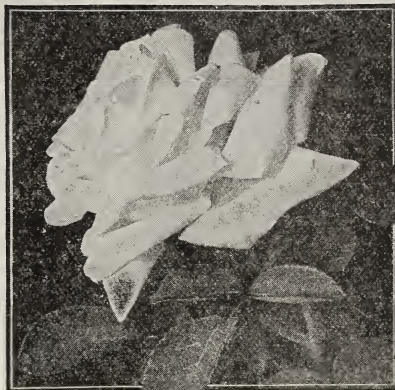
GENERAL JACQUEMINOT—(H. P.)—Bright shining crimson; very rich and velvety.

Each 50c

HUGH DICKSON—(H. P.)—Glowing crimson-shaded scarlet. A strong grower and perpetual bloomer (should be cut back freely).

MADAME CAROLINE TESTOUT—A grand rose of the La France type, but with flowers larger and finer. Color, bright satiny pink; very fragrant and free in bloom. One of the handsomest roses and should be planted extensively.

Each 50c



Frau Karl Druschki

MRS. JOHN LANG—(H. P.)—A soft, delicate pink, with satiny tinge; very free flowering.

PAUL NEYRON—(H. P.)—Deep, shining rose, blooms freely, the largest variety in existence.

ULRICH BRUNNER—(H. P.)—Extra large, bold flowers, full and globular; color, rich glowing crimson, elegantly flamed with scarlet.

Each 50c

THE POPULAR RAMBLER ROSES

The Rambler Roses are strong, vigorous climbers, growing ten to twelve feet high in one season.

Two year old plants, not prepaid, 75c each; doz. \$8.00

FLOWER OF FAIRFIELD—Brilliant crimson, base of petals white; a splendid grower and a great improvement over the old type.

DOROTHY PERKINS—Polyanthus type; a beautiful bright shell-pink; large double flowers.

RED DOROTHY PERKINS—Fine crimson ramblers; glossy green foliage; never troubled with mildew. Flowers very double.

TAUSENSCHON—A lovely shade of soft pink, free and vigorous; splendid foliage.

SINGLE ROSES

1 two year Only—Not prepaid.

AUSTRIAN COPPER—(A. B.)—A beautiful single rose of bright reddish copper. Each 50c

IRISH ELEGANCE—(S.)—Large, single, golden bronze flowers of great beauty, free and constant bloomer, with deep bronze foliage.

Each 85c

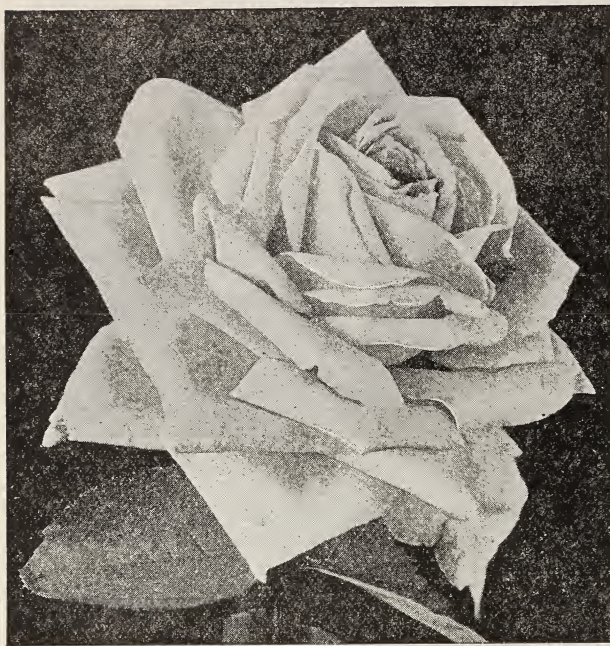
IRISH FIREFLAME—(S.)—Deep orange-splashed crimson, changing to fiery orange crimson; buds hold shape long time. Each 85c



Single Roses

CLIMBING AND PILLAR ROSES

Two year old bushes, field grown, postpaid, 75c each; doz. \$7.50 (except as noted).



AMERICAN BEAUTY — Rich crimson color; delightful fragrance; very free bloomer.

PINK CHEROKEE — Lovely single blossoms, 3 to 5 inches in diameter, saucer shaped and of a beautiful shade of light pink.

CECILE BRUNNER — Clusters of pretty pink flowers, especially beautiful in bud.

GENERAL McARTHUR—(H. T.)—Dazzling crimson scarlet; delicious perfume and magnificent foliage. Blooms in great profusion.

FRAU KARL DRUSCHKI — Identical to bush type; good pillar rose.

LA FRANCE—Identical with the well known La France; vigorous climber.

MAD. CAROLINE TESOUT—Immense globular flowers of the same beautiful shade of pink as seen in the bush sort.

MARECHAL NEIL—A magnificent deep golden yellow variety; so famous as to need no description; finest of its color. Each \$1.00

PAPA GONTIER—(T.)—A "Native Sport" from this favorite variety.

SUNBURST—A splendid climber of the same beauty and freedom of bloom as the bush form of this popular rose. Each \$1.00

ALPHABETICAL LIST OF ROSES

	Price	Page
Admiral Ward.....	\$0.75	91
American Beauty.....	.50	93
Austrian Copper.....	.50	93
Baby Rambler.....	.75	92
Baroness Rothschild.....	.50	90
Betty.....	.75	91
British Queen.....	.75	91
Cecile Brunner.....	.65	92
Chateau Des Clos Vougeat.....	.65	92
Cleveland.....	1.00	89
Columbia.....	1.00	89
Conrad F. Meyer.....	.50	93
Constance.....	1.00	89
Countess Clanwilliam.....	1.00	89
Crimson Emblem.....	1.00	90
Dean Hole.....	.75	91
Dorothy Page Roberts.....	.75	91
Dorothy Perkins.....	.75	93
Duchess of Wellington.....	1.00	93
Edward Mawley.....	.75	91
Etoile de France.....	.65	92
Florence Pemberton.....	.65	92
Flower of Fairfield.....	.75	93
Franz Deegan.....	1.00	90
Frau Karl Druschki.....	.75	93
General Jacqueminot.....	.50	93
General McArthur.....	.75	92
George Dickson.....	.75	92
Gorgeous.....	1.00	89
Grus an Teplitz.....	.60	92

	Price	Page
Hadley.....	\$0.75	91
Harry Kirk.....	.75	91
Hoosier Beauty.....	1.00	90
Hugh Dickson.....	.60	93
Irish Elegance.....	.85	93
Irish Fireflame.....	.85	93
J. B. Clark.....	.65	92
Joseph Hill.....	.65	92
Juliet.....	.65	92
Kaiserin Aug. Victoria.....	.65	92
Killarney Brilliant.....	1.00	90
K. of K.....	1.00	90
Lady Alice Stanley.....	.75	91
Lady Ashtown.....	.75	91
Lady Hillingdon.....	1.00	89
Lady Roberts.....	.75	91
La France.....	.65	92
Lillian Moore.....	1.00	90
Los Angeles.....	1.00	89
Louise Catherine Breslau.....	1.00	90
Lyon.....	.75	91
Mad. Melanie Soupert.....	1.00	90
Mad. Ravary.....	1.00	90
Mad. Caroline Testout.....	.50	95
Mad. Edouard Herriott.....	1.00	90
Maman Cochet.....	.65	92
Marechal Neil.....	1.00	94
Marg. Dickson Hamill.....	1.00	91
Marquis De Sinety.....	1.00	90
Melody.....	1.00	90

	Price	Page
Moss Roses.....	\$0.60	93
Mildred Grant.....	.75	91
Mrs. Aaron Ward.....	1.00	90
Mrs. Alfred Tate.....	1.00	90
Mrs. A. R. Waddell.....	.75	91
Mrs. Charles Russell.....	1.00	90
Mrs. John Laing.....	.60	93
Old Gold.....	1.00	90
Ophelia.....	1.00	90
Papa Gontier.....	.75	91
Paul Neyron.....	.60	93
Pink Baby Rambler.....	.75	92
Pink Cherokee.....	.75	94
President W. R. Smith.....	.75	91
Radiance Red.....	1.00	89
Rayon D'Or.....	1.00	90
Red Dorothy Perkins.....	.60	90
Red Letter Day.....	1.00	90
Rhea Reid.....	.75	91
Richmond.....	.75	91
Souv. De Stella Gray.....	1.00	91
Sunburst.....	1.00	90
Tausendschon.....	.75	93
Tipperary.....	1.00	89
Ulrich Brunner.....	.60	93
Viscountess Folkestone.....	.65	92
White La France.....	.75	91
White Maman Cochet.....	.65	92
Winnie Davis.....	.65	92



ORNAMENTAL CLIMBING VINES

CLEMATIS

Clematis is one of the most beautiful and useful climbers. Their magnificent flowers, borne in great profusion in beautiful shades of lavenders, purples, reds and white, make them especially attractive. Clematis requires a rich loamy soil, but manure should not touch the roots. Cut out the weak and surplus branches in the spring, and tie the vine up well to its support.

VILLE DE LYON—Red. **Sold out**

HENRYI—Fine, large, creamy white flowers; a strong grower and very hardy.

JACKMANII—Intense violet purple, with a rich velvety appearance; distinctly veined.

Large plants, each \$1.00, postpaid

CLEMATIS PANICULATA—A rapid and vigorous grower; it produces sheets of medium-sized, pure white flowers of the most pleasing fragrance; well adapted for covering trellises or fences. **Choice plants, 50c; Extra fine, 75c.**

HONEYSUCKLE

BELGIAN—Flowers yellow, blotched with red above; blooms all summer, fragrant.

JAPANESE—Almost evergreen; fragrant flowers, white changing to yellow.

HALL'S—Almost evergreen, very popular; white turning to yellow.

Each 50c; Select 75c

KUDZU

KUDZU VINE—(*Pueraria Thunbergiana*)—Large foliage and dense shade, growing fifty feet in one season. Flowers plentiful in August, rosy-purple, pea-shaped; in small racemes.

Each 60c

EUONYMUS

RADICANS—A most beautiful evergreen vine of vigorous growth and perfect hardiness. Clings to stone or brick. Most valuable introduction of recent years and takes the place of ivy.

Each 75c

Prices on this page, unless otherwise stated, F. O. B. Portland; if mailed, postage extra.

WISTARIA

W. SINENSIS—(*Chinese Wistaria*)—Grows 15 to 20 feet in a season; has long, pendulous clusters of pale blue flowers in May and June and in Autumn. **Choice plants, \$1.50-\$2.50**


WISTARIA CHINENSIS VARIEGATED—Yellow variegated leaves, pretty after flowering for the beautiful speckled foliage which is very attractive among other green foliage. Flower same as common Chinese Wistaria.

\$1.50 to \$2.50

W. MULTIJUGA—(*Japanese Wistaria*)—Similar to Wistaria Sinensis except in color of flowers which are dark violet blue, borne in very long racemes. **Each \$1.50 to \$2.50**

W. BRACHYBOTRYS—White flowering.

\$1.50 to \$2.50

 **Small plants of Wistaria Chinensis for Spring delivery at \$1.00.**

AMPELOPSIS

VEITCHI—(*"Boston Ivy"*)—Leaves glossy green, coloring bronze in Fall; flowers small; berries deep blue; clings firmly to smooth walls.

QUINQUEFOLIA—(*"Virginia Creeper"*)—Common American Ivy.

ENGELMANNI—Similar to Quinquefolia, but leaves slightly smaller, and will cling to walls without any support. Very hardy and attractive. The improved Virginia Creeper.

Strong 2 year roots, 60c.

ENGLISH IVY

Large, thick, shining, leathery leaves; evergreen. Plant in sheltered position. **Each 35c**

TRUMPET VINE

BIGNONIA RADICANS—(*Trumpet Vine*)—Strong climber; deciduous; flowers orange scarlet. Blooms midsummer. **Each 60c**

DUTCHMAN'S PIPE

ARISTOLOCHIA SIPHO—A handsome bright green luxuriant vine, having large foliage and brownish, pipe-shaped flowers. A strong, rapid grower. **Strong plants, each \$1.00**

CINNAMON VINES are the most desirable, easiest grown climbers in the world. They are from China—the land of wonders. Their abundant blossoms perfume the air for a long distance. No words can describe their delicious fragrance. Perfectly hardy—thriving in all soils, in sun or shade, wet or dry. No insects, blight or disease of any kind ever troubles them, no winter harms. Once planted they will grow a lifetime. **Each 75c**



Shade and Ornamental TREES and SHRUBS

Deliveries can be made from November until May, but orders are accepted at any time for delivery in season.

WE USE every precaution to deliver healthy, vigorous stock, but the measure of your success will depend upon the planting and care given, as careless or ignorant handling kills thousands of fine trees and plants every season. Avoid unnecessary exposure of roots to the air. In the case of evergreens that are "balled," **do not remove the burlap.** Plant as received, only cut the string around the top, then loosen the burlap after the tree is set. If you cannot plant immediately on receipt, always "heel" in the trees so their roots may be in contact with good soil.

Leaving the ground loose after planting has caused tremendous losses that are generally and unjustly blamed to the nurseryman. Another cause of great loss is the wind working the newly set trees loose from the soil. This kills them. Always stake newly set trees if in a windy situation. After trees are set, make a plan of the grounds, marking the different varieties, then remove the wire labels, as they may damage the growing limb.

An hour's exposure of roots to wind or sun may kill any tree; this is especially true of evergreens. In planting cut off the bruised or broken roots with a sharp knife.

If the soil is good and properly prepared, only a hole large enough to easily take the roots need be dug, but better results can always be obtained by digging out a large space and filling in with good top soil. In setting the trees, do not put deeper than they stood in the nursery, excepting some dwarfs, which go a little deeper. **Be sure to Pack the Earth Solidly Around the Roots.** The neglect of this important detail is responsible for many failures.

DECIDUOUS SHRUBS

Prices F. O. B. Portland

ALMOND (*Prunus*)

PINK FLOWERING—(*P. Japonica*)—Well known early dwarf shrub. Double clear pink little roses festoon the gracefully bending branches. **Each \$2.50**

WHITE FLOWERING—(*P. Japonica*)—Same though white flowers. **Sold out**

AZALEA—(*A. Mollis*)—Very bushy, a young and prolific bloomer. Colors, red, orange and yellow. **Sold out**

BERBERRY

PURPLE LEAVED—Having purple foliage, very pretty. **Clump 75c each**

COMMON—(*B. Vulgaris*)—Very graceful and well known; with showy fruit in Fall. **Each 75c**

B. THUNBERGII—(*Japanese*)—Dwarf habit; foliage changes to a beautiful red in Autumn; good hedge plant. **2 to 3 ft., each \$1.00**

CHERRY (*Cerasus*)

Stock sold out

FLOWERING CHINESE—Large double white flowers.

FLOWERING SIEBOLDS RED—Large double red flowers.

CRAB (*Malus*)

BECHTEL'S FLOWERING—(*M. Ioensis Bechtelii*)—Flowers pink and very fragrant. In appearance, a tree of roses. **Each \$1.25**

DEUTZIA

PRIDE OF ROCHESTER—(*Deutzia Crenata*)—Tall, very beautiful. Flowers double white. **2 to 3 ft., each \$1.00**

LEMOINE'S—(*D. Lemoinei*)—A very small shrub with spreading branches, usually about three feet tall. Leaves bright green; flowers white in large clusters. **Each \$1.00**

DOUBLE PINK—(*D. Crenata Flora Rosa Plena*)—Beautiful dainty pink flowers. Very showy. **3 to 4 ft., each \$1.00**

ELDER

GOLDEN LEAVED—Foliage retains its bright golden color through summer. **4 ft., \$1.00**

FILBERT

PURPLE LEAVED—Leaves and husks purple; very ornamental. Nuts good. **3 to 4 ft., 75c**

FORSYTHIA (*Golden Bell*)

Most common; deep green foliage. Fine in partial shade. **2 to 3 ft., 75c**

DECIDUOUS SHRUBS—Continued

HONEYSUCKLE

BUSH—Very beautiful. 3 to 4 ft., 75c
For others, see Vines.

HYDRANGEA

PANICULATA GRANDIFLORA—Immense panicles of bloom, from July to November, creamy white, pink flush. Prune back in early spring, about half of previous year's growth. Hardy everywhere; good for cemetery planting. 2 to 3 ft., 75c; 3 to 4 ft., \$1.00

JAPANESE or HORTENSIA—Blue, pink, white and others. Strong. See page 99.

FRENCH—Very desirable.

LILAC (*Syringa Vulgaris*)

COMMON PURPLE—Very fragrant, and old favorite. 3 to 4 ft., 75c; 10, \$6.00

COMMON WHITE—Same as above, flowers white. 3 to 4 ft., 50c; 10, \$4.50

MOCK ORANGE (*Philadelphus*)

GRANDIFLORA—Flowers large; slender twig habit. 3 to 4 ft., each 50c; 10, \$4.50

HYBRID. 2 to 3 ft., 50c

QUINCE

JAPONICA—(*Japan Flowering*)—Blossoms vary from the richest scarlet to the most delicate blush color; the fruit is deliciously fragrant, but not edible. 2 to 3 ft., each 60c to 75c

SPIRAEAS

Each 75c

SPIRAEA THUNBERGII—Charming spiraea with graceful form and abundant blooms.

BILLARD'S—(*S. Billardi*)—Flowers red in dense spikes, blooms most of Summer.

VAN HOUTTE'S BRIDAL WREATH—(*S. Vanhoueltii*)—Very graceful; flowers white in round clusters. May.

CRIMSON—*Anthony Waterer (S. Bumalda)*—A most desirable variety, having deep red flowers, blooming all Summer, fine for foreground planting.

JAPANESE—(*S. Callosa*)—Purplish foliage while young, flowers rosy pink in July.

SNOWBALL

COMMON—Flowers globular, pure white, in May. 3 to 4 ft., each 60c; 10, \$5.00

JAPANESE—Flowers pure white, delicate large globular heads in May. 2 to 3 ft., 85c

TAMARIX

JUNIPERINA—Ornamental tree with soft, Juniper-like leaves, pink flowers.

3 to 4 ft., \$2.50

WEIGELIA

CANDIDA—Flowers white, bush tall. 75c

ROSEA—Flowers light pink, shrub compact. 75c

EVA RATHKE—Flowers red, one of the best. Slightly dwarf. 75c

VARIEGATED—Leaves become silver white. 75c

SHADE AND ORNAMENTAL TREES

SPACE will not permit us to give more than the very briefest description of ornamentals in this booklet, but complete descriptions and detailed information covering your planting problems will be promptly and cheerfully furnished on request, together with such suggestions as we feel will prove helpful to you. We shall be pleased to quote special prices on larger grades than those offered in the list.

When large trees are planted, they should be cut down to within 8 feet of the ground and all laterals should be shortened in, thinned out if they are too thick and cut away entirely to about 6 feet off the ground.

We shall be pleased to give quotations to persons desiring large numbers.

Prices of the following are for the 7 to 8 feet grade, excepting where otherwise specified.

DECIDUOUS TREES

ASH

AMERICAN WHITE—Broad, round head and dense foliage. Very fine. Each \$1.00; 10 \$9.00

BASSWOOD (*See Linden*)

BEECH

AMERICAN—(*F. Americana*)—Unequaled for splendor. Each \$1.50

PURPLE LEAF—(*F. Sylvatica Purpurea*)—The well known purple leaved beech. Its brilliant foliage makes it a very effective tree where rich color effects are wanted.

Each \$2.00

BIRCH (*Betula*)

EUROPEAN WHITE—(*B. Alba*)—Silvery white bark and slender drooping branches.

Sold out

CATALPA

Splendid trees, white flowers, bright foliage.

CATALPA WESTERN—(*Speciosa*)—Very rapid grower; fine as a quick shade.

7 to 8 feet, each \$1.50; 10, \$12.00

DOGWOOD (*Cornus Florida*)

WHITE FLOWERING—Flowers white, 3 in. in diameter, blooming before leaves come in spring. Price, 4 to 5 ft., ea. \$1.50; 10, \$12.00



DECIDUOUS TREES—Continued

ELM

AMERICAN WHITE—A magnificent tree with drooping branches.

7 to 8 ft., ea. \$1.25; 10, \$10.00

CORK BARK—Desirable for street planting. Young branches very corky. Each \$1.25

HAWTHORNE

PAUL'S DOUBLE SCARLET—(*C. Monogyna Pauli*)—A tree of fine habit; flowers bright scarlet, large, full and very double in heavy clusters on long sprays. Sold out

DOUBLE WHITE—(*C. Monogyna Alba Plena*)—Flowers small. Leaves lustrous green color. Sold out

HORSE CHESTNUT (*Aesculus*)

WHITE FLOWERING—(*A. Hippocastanum*)—Foliage showy, flowers stand in upright panicles. Each \$1.00

RED FLOWERING—(*A. Rubricunda*)—Same as above, flowers red. Each \$1.25

LABURNUM (*Golden Chain*)

LABURNUM—(*L. Vulgari*)—A beautiful small growing tree, with long, drooping racemes of fragrant yellow flowers. Each \$1.00 up

LARCH (*Larix*)

AMERICAN—(*L. Americana*)—A tall conical tree, very graceful in park and landscape; remarkable for its soft green foliage, which expands with the first warm days of early Spring. Each \$2.00

LINDEN (*Tilia*)

AMERICAN—(*T. Americana*)—Shapely and handsome; foliage large.

EUROPEAN—(*T. Europea*)—Similar to American. Leaf smaller. Each \$1.50

LOCUST (*Robinia*)

BLACK—(*R. Pseudacacia*)—Rapid grower; fine for street planting. Each \$1.00

MAGNOLIA

CUCUMBER TREE—(*Magnolia Acuminata*)—Tall, pyramidal tree. Showy leaves and yellowish-white flowers. Each \$2.50

MAPLE (*Acer*)

ASH LEAVED—(*A. Negundo*)—A rapid grower, fine for street tree, foliage ash-like. Each \$1.50

OREGON SOFT—(*A. Macrophyllum*)—A rapid grower, fine for avenues. Leaves large. Each \$1.00

SYCAMORE—(*A. Pseudoplatanus*)—Tree large and spreading with handsome foliage. Each \$1.50

NORWAY—(*A. Platanoides*)—Large, growth compact; foliage deep green. Handsome. Each \$1.50

MOUNTAIN ASH (*Sorbus*)

AMERICAN—(*S. Americana*)—Very ornamental, handsome foliage turning orange red in the Fall. Red berries remain on the tree most of the Winter. Each \$1.00

EUROPEAN—(*S. Aucuparia*)—White flowers, then beautiful red berries. Each \$1.00

MULBERRY (*Morus*)

DOWNING'S EVERBEARING—(*M. Rubra*)—A rapid grower with good fruit. Fine as a shade tree. Each \$1.50

NEW AMERICAN—(*M. Americana*)—A rapid grower, handsome; splendid as a shade tree. Each \$1.50

OAK (*Quercus*)

Each \$1.00

ENGLISH—(*Q. Pedunculata*)—Low growing spreading habit and rapid growth.

RED AMERICAN—(*Q. Rubra*)—A rapid grower, large size.

PYRAMIDAL—(*Q. Pedunculata Fastigiata*)—Handsome with pyramidal branches and deep green foliage. Each \$1.50

SCARLET—(*Q. Coccinea*)—Pyramidal shape foliage changes to bright red in Fall.

OAK PIN—(*Q. Palustris*)—The Pin Oak is by far the most planted of all the native oaks. Graceful in form, glossy deeply-pinnated foliage. Splendid for lawn or street. Each \$2.00

OAK RED—(*Q. Rubra*)—Ideal for lawn or street. Each \$2.00

POPLAR (*Populus*)

6 to 8 feet, \$1.00; 8 to 10 feet, \$1.50

BOLLE'S SILVER—(*P. Alba Bolleana*)—A compact upright grower, foliage glossy.

LOMBARDY—(*P. Nigra Fastigiata*)—An erect rapid grower.

BALM OF GILEAD—(*P. Candicans*)—Tall and handsome, branches spreading.

PRUNUS PISSARDI

Foliage and fruit entirely red. Plums very good quality. Each \$1.50

PRUNUS VESUVIUS

Rich red luxuriant foliage. Holds color late in the Fall. 4 to 6 feet, each \$1.50

SYCAMORE OR PLANE (*Platanus*)

AMERICAN—(*P. Occidentalis*)—Has broad foliage and handsome bark. Each \$1.00

TULIP TREE—(*Liriodendron Tulipifera*)—Leaves light, glossy green, fiddle shaped flowers, greenish yellow, tulip shaped.

Each \$1.50 to \$2.00

DIAMOND PLANT FOOD for Palms.

EVERGREEN SHRUBS

AZALEA

CRIMSON—(*A. Hinodegiri*)—(*Asahi*)—Evergreen variety from Japan, bright minute, waxy foliage that turns garnet in Winter. Loaded in early Spring with masses of scarlet flowers which almost cover the plant. Low-growing, and one of our best massing shrubs.

Choice plants, \$2.00 to \$2.50 each

ABELIA GRANDIFLORA—Graceful evergreen shrub with small glossy leaves and beautiful small white flowers blushed with pink.

18 to 24 inches, each \$1.50

BARBERRY

BERBERIS DARWINI—Shrub with holly-like leaves and blue berries; clusters of yellow flowers adorn the branches in early Spring; desirable for hedges. Each \$1.50

DULCIS—A new variety. Strong upright grower with beautiful glossy leaves.

CAMELLIA

JAPONICA—White, pink or red. Fine winter flowering shrub with dark green glossy leaves; flowers waxy. Sold out

COTONEASTER

HORIZONTALIS—Delightful low-growing shrub. Glossy foliage almost evergreen, and bright red holly-like fruits. Fine for Rockery. Each \$1.50

MICROPHYLLA—Smaller shrub than *Horizontalis*; flowers white, usually solitary blooming in late Spring. Bright red berries lasting the greater part of Winter.

SIMONSII—More upright than the preceding. Prized for flowers and bright red berries.

BOXWOOD

Splendid Specimens

PYRAMID: 1 to 2 feet, each \$3.00

2 to 3 feet, each \$4.00

BOX PLANTS—For hedges and borders.

Sold out

BROOM (*Cytisus*)

SCOTCH—(*C. Scoparius*)—Branches drooping, covered in Spring with bright yellow pea-shaped flowers.

WHITE FLOWERING—(*C. S. Alba*)—Same as Scotch. Flowers white. Each \$1.00

HOLLY (*Ilex*)

We have a fine lot of Hollies, both seedling and grafted stock. If wanted in quantity, write for special prices.

ENGLISH—(*Aquifolia*)—Prickly, dark green foliage; grows moderately fast, covered during the winter months with bright red berries.

Prices—Berry bearing trees, ea. \$3.00 and up

HYDRANGEA

HORTENSIS BLUE—Very fine Japanese variety for potting and porch decoration; large flowers, rosy blue to light blue, according to the soil.

HORTENSIS PINK—Fine truss, pure pink. Each 75c, \$1.50, \$2.50

LAURISTINUS

Luxuriant dark green foliage, with clusters of small white flowers in winter.

1 to 2 feet, each \$1.50 and up

LAUREL

PORTUGAL—Dwarfish, leaves dark green; flowers very sweet. 2 to 3 feet, \$3.25

ENGLISH—Leaves broad, flowers in clusters, creamy white. Purple berries.

18 inches to 3 feet, 75c to \$3.00

LONICERA NITIDA—Resembles the box wood and is used in tubs and pots for porch decorations.

In ornamental shrubbery a great many varieties are sold out for this season or will be by time this catalog reaches you.

OREGON GRAPE—(*Mahonia Aquifolia*)—Shining, purple, prickly leaves; bright flowers; yellow; berries blue-black. Each \$1.00

PRIVET CALIFORNIA—(*Ligustrum Ovalifolium*)—One of our best hedge plants, glossy leaves, almost evergreen. (*Hedge*.)

Plants 12 to 18 in. 10 for \$1.00; 100 for \$7.00

Plants 18 to 24 in. 10 for \$1.25; 100 for \$8.50

RHODODENDRON

GRAFTED VARIETIES—Magnificent, June and July flowering, evergreen shrubs; the finest and most hardy of all evergreens; they prefer a somewhat shady situation. There are many varieties, the flowers of which are produced in great abundance and in shades of the following colors: White, blue, purple, cherry, lilac, mauve and crimson.

Choice plants according to number of buds. 15 to 18 buds, \$5.50; 12 to 15 buds, \$4.50; 8 to 12 buds, \$3.50.

WEeping TREES

ASH (*Fraxinus*)

EUROPEAN WEeping—(*F. Excelsior*)—Splendid arbor tree. Each \$1.25; 10, \$10.00

WILLOW (*Salix*)

WISCONSIN—(*S. Babylonica dolorosa*)—Large glossy leaves and very pendulous habit.

Each, 75c; 10, \$6.50

AMERICAN—(*S. Babylonica*)—The well-known common weeping willow.

Each 50c; 10, \$4.50

MISCELLANEOUS ORNAMENTALS

BAMBOO—Ornamental plant, with almost evergreen foliage. Strong clumps, 3 to 6 feet.

Each \$1.00 to \$2.00

PAMPAS GRASS—Ornamental grass, easily grown, producing long, pointed leaves and majestic, silvery white plumes; 6 to 8 ft. high.

Sold out

Large specimen plants, \$2.00 to \$5.00

YUCCA—(*Spanish Bayonet* or *Adam's Needle*)—Bell-shaped flowers on laterals, forming a perfect pyramid; fine for rockwork, 2 to 3 feet. Each \$1.50 up



FRUIT TREES, BERRY BUSHES, PLANTS

IN THE PURCHASE of fruit stocks great care should be given to the selection of varieties that will meet your conditions and requirements, as many that thrive and bear abundantly in one section often prove disappointing under variable conditions. Also many splendid sorts for home use are totally unsuited for profitable marketing. For this reason we offer a large assortment of improved varieties carefully tested and selected for their special merits and their adaptability to varying conditions, and if you will state whether you intend growing for distant or local market or for home use, giving location and general conditions, we can recommend or assist in the selection of those varieties that will give you best results.

KEEPING TREES OVER WINTER FOR SPRING PLANTING

This can easily be done by following the simple instructions given below:

Select a well-drained spot where the soil is mellow, and dig a trench deep enough to cover the roots well; put in one layer of trees, placing them so they will not be erect but at a decided angle, pack the dirt firmly about the roots, then place the next layer. When trees are all "heeled" in, cover the tops with boughs or bank up the earth over them. Be sure there is no grass or rubbish near to harbor mice. In mild situations where winters are not severe, do not bury or cover the tops; simply "heel in." Trees thus kept on hand ready for planting as soon as the frost is out of the ground will be found well preserved and are more sure to grow than later spring planting. Besides, you get better service by ordering in the early fall as stocks are more complete.

If trees are frozen in transit, do not unpack, but set away in a cool cellar and allow them to thaw gradually. Trees or roses that are dried out and shriveled should be buried, tops and all, in moist earth for a few days. This will restore them.

Deliveries can be made from November until May, but orders are accepted at any time for delivery in season.

APPLES

This is a good year to plant Apple trees. The standards of production and markets are well established, making an apple orchard a safe investment. Write for quotations on large orders.

	Each	Per 10	Per 100	F. O. B.
First Grade, 2 years.....	\$0.75	\$6.50	\$50.00	Portland;
First Grade, 4 to 5 feet.....	.50	4.50	40.00	If mailed,
First Grade, 1 year, 3 to 4 feet.....	.40	3.50	30.00	postage extra.

SUMMER VARIETIES

EARLY HARVEST—Medium size; bright straw color; tender and fine, good for table and cooking. July.

FAMEUSE—(Snow Apple)—Medium, roundish, greenish-yellow, with streaks of deep red and sunny side; flesh remarkably white; fine dessert fruit. October to December.

FALL PIPPIN—Yellowish green; good cooking apple. September.

GOLDEN SWEET—Large, pale yellow, tender and rich; good for cooking; fine bearer. August.

GRAVENSTEIN—Large, beautifully dashed with deep red and orange, tender and crisp, with a highly aromatic flavor; tree very vigorous. August.

AUTUMN VARIETIES

RED ASTRACHAN—Large, deep crimson, flesh white, moderately juicy, with an agreeable rich acid flavor; very productive. August.

WEALTHY—Medium, whitish yellow, shaded with deep red; flesh white, tender and juicy. October.

WHITE ASTRACHAN—Greenish white, very showy, constantly, growing in favor where known. Late July.

YELLOW TRANSPARENT—Medium size, roundish, slightly conical; skin pale yellow; flesh tender, juicy, sub-acid; good; bears at an early age. July.

WINTER VARIETIES

ARKANSAS BLACK—Medium round; yellow where not covered with a beautiful dark maroon, approaching black; flesh firm, fine grained, juicy; a long keeper. December to April.

BISMARCK—The apple novelty; everyone should try it; tree of short, stocky growth, thick, healthy foliage; fruit large, handsome, yellowish, sometimes shaded red cheek; flesh tender, pleasantly sub-acid; entirely new; seldom failing to bear when two years old. September.

BALDWIN—Large, rounded; deep, bright red; very productive; crisp, fine flavor; one of the best and most popular winter apples. November to February.

DELICIOUS—A splendid apple; coming into prominence rapidly. Tree vigorous and hardy and the fruit equals the name in every respect. Fine for market and home use and especially adapted to Eastern Oregon and Washington. Keeps till April.

GRIMES GOLDEN—Very popular. Rich golden yellow; flesh tender, juicy and rich. Tree hardy and vigorous, bearing young. November to December.

JONATHAN—Tree vigorous, long lived and an early bearer. Fruit beautiful red and oblong; fine quality. Valuable as a pollenizer with Spitzenberg and Newtown. October to January.

APPLES—Continued

KING—Large and handsome, striped red and yellow; tree vigorous and productive. November to December. Good mountainous apple.

MCINTOSH RED—A seedling of the Fameuse; bright red; flesh white, very tender and delicious. Long lived and very productive. Adapted to Montana. November.

MULTNOMAH—(New)—A grand new sort; a hybrid between the American Pippin and Rome Beauty. Originated by H. A. Lewis. Fruit, large; color red, striped yellow; flesh white and fine and of sub-acid flavor; extra long keeper and in its prime from February to June; the coming apple for long distance shipment and Oriental trade. Price, each 50c

NORTHERN SPY—Large, round, greenish-yellow, stripes of purplish-red; flesh white, juicy, brisk sub-acid; valuable for "top work." Requires good soil. December.

ORTLEY or WHITE BELLFLOWER—White fleshed, fine grained conical fruit of superior quality; one of the best. December to April.

RED CHEEK PIPPIN—Excellent variety; sub-acid flavor; yellowish green color; red cheek; large size; good bearer. Keeps till March.

ROME BEAUTY—Large, yellow, shaded with bright red; juicy and sub-acid; fine market sort; good bearer. November to February.

SPITZENBERG—Large, oblong; yellowish ground with broken stripes of bright red flesh yellowish, juicy, delicious rich flavor. November to March.

GOULD SPRAYERS will give and maintain the necessary pressure to spray right. They are built for lasting service. See Page 116.

STAYMAN WINESAP—A seedling of the Winesap. Yellow striped with red. Flesh firm, crisp, juicy and very tender and rich; sub-acid. A drought resister; a profitable market variety. January, May.

TOLMAN'S SWEET—Medium size, pale, whitish yellow, tinged with red, flesh firm; rich and very sweet; best to preserve, vigorous; productive. November to April.

WINTER BANANA—Fancy market fruit; pale yellow with pink blush. Has a delightful aroma and suggestive banana flavor. Not a good shipper. November.

YELLOW BELLFLOWER—Large, oblong, yellow, sometimes a blush in the sun; flesh firm, crisp, juicy, sub-acid; tree a good grower and very productive; succeeds well in this valley. October to January.

YELLOWNEWTOWN PIPPIN—Large; skin smooth, golden yellow; flesh firm, crisp, juicy; one of the standard varieties for export. December to May.

CRAB VARIETIES

FLORENCE—Red striped; early good annual bearer, juicy and crisp; fine for home gardens. September 1.

HYSLOP—Large, deep crimson; hardy. November and January.

RED SIBERIAN—Yellow with scarlet cheek. Bears young and abundantly. September.

TRANSCENDENT—Very large, good for cider; yellow striped red. Productive. Adapted to Montana. September.

PEARS

WE CAN SUPPLY all standard varieties of Pears, but list only those in greatest demand. If the variety you want is not listed, write us.

	Each	Per 10	Per 100
First Grade, 1 year, 4 to 6 feet.....	\$0.75	\$7.00	\$60.00
First Grade, 1 year, 3 to 4 feet.....	.60	5.50	50.00

F. O. B. Portland; if mailed, postage extra.

AUTUMN VARIETIES

BARTLETT—Large; skin thin, clear, lemon yellow, with soft blush on the sunny side; flesh white, buttery, very juicy and highly flavored; the best summer pear in existence. August, September.

BEURRE BOSC—Large, beautiful, russety; highly flavored; fine for shipping. September.

BEURRE D'ANJOU—Large, handsome, fine flavor; tree vigorous; heavy bearer; keeps till Christmas. September.

COMICE—A splendid commercial variety, being of fine size; good appearance; ships well. October.

FALL BUTTER—A favorite fall pear; yellow, sweet and juicy. September.

FLEMISH BEAUTY—Large, beautiful, rich and sweet; pale yellow with slight russet. Adapted to Montana and the Northwest.

SECKEL—Rich and highly flavored; its highly concentrated, spicy, honey flavor is unequaled; skin brownish green, russet brown cheek; September, October.

WINTER VARIETIES

P. BARRY—Fine keeper. Very large, juicy, fine grained, yellow. December, March.

WINTER BARTLETT—This fine pear originated in Eugene, Oregon. Fruit large, closely resembling the famous Bartlett in shape and appearance, but ripening considerably later; flavor almost identical with the Bartlett; is undoubtedly one of the few pears of recent introduction of real merit.

WINTER NELIS—Medium; skin yellowish green, dotted with gray russet; flesh yellowish white; fine grained, of a rich saccharine, aromatic flavor. December.



CHERRIES

4 to 6 ft., \$1.25 each, \$10.00 per 10, \$90.00 per 100

F. O. B. Portland; if mailed, postage extra

BURBANK—(*Burbank's Production*)—The earliest of all large cherries; the fruit is extremely large for an early cherry, attractive deep crimson color, and of superior quality. The Burbank produces as well or better than most late cherries, but it brings the early market price. This cherry means profit to you. **Stock sold out**

BING—Originated in Oregon, from seed of Black Republican; fruit large, dark brown or black; very fine; late; good shipping variety. July.

BLACK REPUBLICAN—(*Lewelling*)—Seedling, raised by Seth Lewelling, of Oregon; large size, black, sweet, with purplish flesh; late and a good shipper. June.


KENTISH—(*Early Richmond*)—Dark red, juicy; one of the best sour cherries and unsurpassed for cooking purposes; very productive. Mid-May.

LAMBERT—Fruit of largest size and of fine quality; color deep rich red; flesh firm and of fine flavor; a fine market variety; ripens two weeks later than Royal Ann. Mid-July.

LATE DUKE—Large, light red; late and excellent, sub-acid. Late July.

MAY DUKE—Large, rich, dark red; flesh tender; juicy and sub-acid; an excellent variety and one of the earliest of its class. May.

ROYAL ANN—(*Napoleon Bigarreau*)—A magnificent cherry of the largest size; pale yellow becoming amber in the shade; richly dotted and spotted with deep red, and with a bright red cheek; flesh very firm, juicy and sweet; tree a rapid grower and immense bearer. July 1.

 **SPRAYS AND FERTILIZERS—PAGES 110-114.**

PRUNES

IF YOU CAN—Grow Prunes—The demand is always good and will increase every year as they can only be grown in certain sections, but where conditions are right they are easily and profitably produced.

PRICES, except where noted: (Special prices in 1000 lots)	Each	Per 10	Per 100
First Grade, 2 years.....	\$1.00	\$9.00
First Grade, 1 year, 6 to 8 feet.....	1.00	9.00	\$75.00
First Grade, 1 year, 4 to 6 feet.....	.50	4.00	35.00
First Grade, 1 year, 3 to 4 feet.....	.40	3.00	25.00

F. O. B. Portland, postage extra.

GIANT—Largest prune known; fruit averaging 1½ to 2 ounces each; retaining the good qualities of the smaller varieties.

HUNGARIAN—Very large; dark red, juicy and sweet; good shipper. August.

ITALIAN—(*Fellenberg*)—Large, oval, tapering at both ends; dark purple; flesh greenish yellow; separates freely from the stone; best for drying. August.

Write for Special Prices in Quantities.

PACIFIC—Large, sweet; same color as Italian. Good canner or to eat raw. Early August.

PETITE—(*French*)—Medium, egg shaped; violet purple; sweet, rich and sugary; very productive; standard variety for drying. August.

PLANT a Prune Orchard Now.

SILVER—Seedling of the Coe's Golden Drop; tree vigorous and productive; fruit large and superior; excellent for drying or canning. September.

NEW STANDARD—(*Burbank Production*)—The trees are enormous and never failing bearers, and good, healthy growers. Well grown fruits measure four and a half inches around one way by nearly six inches the long way. Skin purple, with a heavy blue bloom; flesh amber or honey yellow, fine grained, juicy, yet firmer than most other drying prunes, very sweet and a perfect freestone.

SUGAR—(*New*)—Tree vigorous grower; early variety; fruit ripens 23 days before the French; is four times as large and dries in half the time; flesh tender and rich in sugar; color dark purple. Early August.

PLUMS

2 year, \$1.00

4 to 5 ft., 50c each, \$4.50 per 10, \$40.00 per 100

3 to 4 ft., 40c each, \$3.50 per 10, \$30.00 per 100

F. O. B. Portland

BRADSHAW—Reddish purple, juicy and pleasant; adheres partially to the stone. July.

COLUMBIA—Largest size, nearly globular; brownish purple; rich, sugary, freestone. August.

COE'S GOLDEN DROP—Very large; light yellow; sweet and delicious. Late September.

DAMSON—Small, oval, bluish purple; flesh melting, rather tart. Tree very fruitful and hardy. August.



PLUMS—Continued

DAMSON—SHROPSHIRE—Medium size, dark purple; very firm; flesh greenish, juicy and rich. Vigorous. Late September.

GREEN GAGE—Small round; flesh pale green, melting and juicy; freestone. Mid-July.

MAYNARD—Dull red, large, round and firm; rich and sweet; sturdy, quick-growing, heavy-yielding variety; extra fine; ripens in July.

PEACH—Very large; skin brownish red, slightly coarse grained, but juicy; freestone; very popular. July.

PRINLEW PLUM—Best large Plum for fruit market. Larger than Giant Prune and quite solid meat. Good shipper.

Each \$1.00; 10, \$8.50

SATSUMA—(*Blood Plum*)—Quite popular; large, dark red from skin to pit, which is small, firm and juicy; tree productive. Early July.

WASHINGTON—A large plum; skin dull yellow, with a pale crimson blush; flesh firm; very sweet and luscious; freestone. Early August.

YELLOW EGG—Very large; skin of a deep golden color, but rather acid; excellent for cooking; very showy. August.

PEACHES

4 to 5 ft., 75c each, \$6.50 per 10, \$50.00 per 100

F. O. B. Portland; postage extra if mailed

EARLY ALEXANDER—One of the largest and best of the extra early varieties. Almost freestone. July.

EARLY CRAWFORD—Very large, yellow, red cheek; sweet and excellent; popular for table and canning; freestone. August.

ELBERTA—Very large bright yellow, red cheek; juicy, sweet; regular bearer; freestone. Late July.

HALE'S EARLY—Early, free; extra quality; hardy; prolific.

LATE CRAWFORD—Very large; yellow, dark red cheeks; flesh deep yellow; juicy; rich and excellent; freestone; valuable for canning and drying. September.

LOVELL—Leads all other freestones, especially in California; medium to large; shaded red; flesh firm and rich. Fine for canning, drying and shipping. Tree vigorous and good bearer. August.

MAYFLOWER—Beautiful red all over; extremely early; tree hardy and healthy. Last of June. Freestone.

MUIR—Large, pale yellow; very firm and sweet; best for drying; freestone. August.

SALWAY—Creamy yellow, red cheek; flesh deep yellow, red at the pit; rich and sweet. Freestone. Late September.

TUSCAN CLING—Very large; yellow, blushed red. Vigorous; strong grower. July, August.

APRICOTS

4 to 5 ft., 75c each, \$6.50 per 10, \$50.00 per 100

3 to 4 ft., 50c each, \$4.50 per 10, \$40.00 per 100

F. O. B. Portland, postage extra if mailed

THE LEWIS—The new Lewis Apricot is the largest, strongest growing, best yielding, best flavored apricot we have ever seen, and is perfectly hardy. Grown extensively in the "Good-noe Hills" district. July, August.

MOORPARK—Very large, yellowish green, brownish red and the sunnyside; flesh bright orange; fine for canning and drying; freestone. July, August.

ROYAL—Above medium size; sweet, rich, juicy; good dryer and canner. July.

TILTON—Large; rich color, high flavor; very productive; similar to Royal; later. July.

BLENHEIM—Deep orange, sometimes blushed, tender, rich and juicy. Tree vigorous. Good for Pacific Coast. Last of June.

NECTARINES

4 to 5 ft., 75c each, \$6.50 per 10, \$50.00 per 100

F. O. B. Portland; postage extra if mailed

BOSTON—Large, deep yellow, bright blush; flesh yellow; very rich and luscious. Best for Oregon. August 1.

EARLY VIOLET—Medium; skin pale, shaded violet; flesh white; good. July.

Our **DIAMOND LAWN GRASS** makes an Evergreen, Velvety Turf

PRUNING TOOLS, FRUIT LADDERS, ETC., Page 126

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG

DWARF FRUIT TREES

Ideal for home gardens; come into bearing early. Forty Dwarf Trees can be planted in a space 50 feet square and will not shade the ground, which can be cultivated between the trees. For best results Dwarf Trees must be planted in good rich soil and be well cared for; they should be pruned back about two-thirds of their new growth each spring.

PRICE: Each \$1.00, 10 for \$9.00. F. O. B. Portland, postage extra.
DWARF PEARS—Bartlett. **DWARF APPLES**—Write for varieties.

NUT TREES

ALMOND (*Nut Bearing*)

ALMOND—(*Nut Bearing*)—Almonds can be grown successfully in many sections of Oregon and Washington, and are attracting much attention from commercial orchardists. We can supply most of the leading varieties at price listed. Special prices on large orders.
 3 to 5 ft., each 75c; 10, \$6.00; 100, \$50.00

I. X. L.—A vigorous grower and sure cropper, producing nuts of large size, and handsome appearance; shell thin; most popular commercial sort.

NONPAREIL—Tree beautiful, slightly weeping; nut sweet and shell very thin. Best for the home.

BUTTERNUT—A beautifully formed tree bearing a rough coated nut of most attractive flavor, well known to the Middle West. Succeeds fairly well in the Pacific States.

3 to 5 ft., each 75c; 10, \$6.00

HICKORY

SHELLBARK—Popular Eastern variety; tree hardy but slow grower. Nuts medium size; very good. Quality excellent.

3 to 5 ft., each \$2.00; 10, \$15.00

FILBERTS

BARCELONA—Magnificent large nut from Spain, first quality; can be grown as low standard tree or bush.

2 to 3 ft., each 75c; 10, \$6.00

DU CHILLY—The largest Filbert on Pacific Coast. Nuts are broad, 1 inch by $\frac{3}{4}$ of an inch; full fleshed and sweet; best grown as low standard. Special prices on large orders. Du Chilly is a good pollinizer for Barcelona.

2 to 3 ft., each 75c; 10, \$6.00

KENTISH COB—An English variety of fair quality and liked by many planters. Nuts large and good tasting.

2 to 3 ft., each 75c; 10, \$6.00

WALNUTS

Walnuts are a sure and profitable crop on the Pacific Coast, and we also urge their planting for shade and ornamental purposes. They grow rapidly, are free from pests, and are handsome and lasting. Only grafted trees should be planted as they yield heavier, the nuts are of better quality and more uniform.

GRAFTED WALNUTS

We offer a splendid strain of Franquettes, the best variety for this section, grafted on four-year California Black Walnut—sturdy, thrifty trees with big fibrous roots. Samples can be seen at our store. The best to plant. Comes to bearing much younger than seedling walnut.
Prices, F. O. B. Portland.

Cannot be mailed. } 5 to 6 ft., each \$3.50

SEEDLING WALNUTS

FRANQUETTE AND MAYETTE—Second generation, soft shell, selected stock. Trees hardy and prolific bearers. Nuts are rich and meaty.

Each \$1.00

CALIFORNIA BLACK—A rapid grower and very desirable; nut medium size, with hard, smooth shell. Adapts itself easily to different climates.

Each \$1.75

QUINCE

PRICES: Each 10
 First Grade, 2 years..... \$1.00 \$9.00
 Postage Extra

APPLE OR ORANGE—Well known standard variety; early; large, golden yellow; good for preserving or flavoring. September.

CHAMPION—Large, yellow; flesh cooks very tender; flavor is most delicious; more productive than the orange. October.

PINEAPPLE—Flavor is suggestive of the pineapple; the fruit resembles the Orange quince; making superior jelly; can be eaten raw and has a most exquisite and delicious flavor, not equaled by any other quince. September.

CURRENTS

Currents are a profitable, easily grown crop, and the market is always good.

PRICES: Each 25c; 10 \$2.00; 100 \$15.00. F. O. B. Portland, postage extra.

Federal quarantine prevents shipment outside of State.

PERFECTION—New; largest and most prolific currant; bright red, rich flavor mild sub-acid.

CHERRY—Very large; deep red; fine for preserving; valuable market variety.

FAY'S PROLIFIC—Bright red, very sweet; fruit hangs on better than most varieties.

VICTORIA—Large, bright red bunches; late productive.

WHITE TRANSPARENT—The best white currant known. Splendid market variety; rich flavor; mild sub-acid.

GRAPES

PRICES, except where noted: Write for prices in quantity.

	Each	Per 10	Per 100
2 year plants, not prepaid, postage extra.....	\$0.25	\$2.00	\$18.00

CAMPBELL'S EARLY—Berries large, nearly round, black, with light purple bloom; flesh rather firm but tender; quality rich, sweet, slightly vinous; a strong and vigorous grower. August.

MOORE'S EARLY—Bunch medium; berry large, resembling Concord, but more pulp and is earlier.

CONCORD—Large, black grape; bunches compact; berries round, sweet and pleasant. August.

DELAWARE—One of the finest of our native grapes; grows freely and is perfectly hardy; ripens early; berries small, light red. August.

EATON—Vigorous grower; very productive; bunches large, compact; fruit large, round, black, covered with a thick blue bloom. September.

NIAGARA—Bunch medium; berry large, roundish, uniform; skin thin but tough; pale yellow flesh tender and sweet; vine vigorous and productive; one of the best white grapes. September.

WORDEN—Bunch very large and compact; berry large, black; an improved Concord. Late August.

EUROPEAN VARIETIES

FLAMING TOKAY—Large, light red; flesh firm and sweet; fine table sort and a good shipper. September.

Tokay, Muscat, Malaga and other European Varieties, Choice Plants at above Prices.

DIAMOND FERTILIZERS

Are a safe investment. Ask for our Booklet "FERTILIZERS"

GOOSEBERRIES



PRICES: Each 25c; per 10 \$2.00; per 100 \$12.00; F. O. B. Portland
Federal Quarantine prevents shipment of Gooseberries outside of State.

PEARL—Large, light yellowish green; very hardy and free from mildew; superior in size and quality. Very prolific.

RASPBERRIES (Red Caps)

Prices except where noted: Not prepaid, 1 year—Each 10c; per 10, 50c; per 100 \$2.00

CUTHBERT—Deep rich red, large and firm; one of the best market berries. Ripens medium to late.

MARLBORO—Standard, light crimson, large, very firm; good commercial variety; ripens early.

RASPBERRIES (Black Caps)

Prices except where noted: Not prepaid, 2 years—Each 25c; 10, \$2.25; 100, \$20.00; 1 year—Each 20c; 10, \$1.50; 100, \$12.50.

GREGG—Of good size, fine quality; very productive and hardy. Takes same position among black caps as Cuthbert among the red sorts.

PLUM FARMER—Large black, hardy and productive. One of the very best.

OREGON CHAMPION—Berries very large, pale green; sweet, fine; bush strong, prolific bearer. This is the standard commercial sort for our section and is best for home use.

ASPARAGUS ROOTS

Asparagus is healthful and delicious—easy to grow and profitable for marketing.

ONE YEAR OLD PLANTS—Postpaid, 30c doz.—75c per 50—\$1.15 per 100—by express or freight 25c dozen—60c per 50—90c per 100—\$8.00 per 1,000.

TWO YEAR OLD PLANTS—Postpaid, 40c dozen—\$1.00 per 50—\$1.75 per 100—by express or freight 30c dozen—75c per 50—\$1.25 per 100—\$10.00 per 1,000.

HORSE-RADISH

Postpaid 5c each—35c dozen—by express or freight 25c dozen—\$1.50 per 100.

Price by the 1,000, \$10.00.

VEGETABLE PLANTS

In Season—See Page 109.

LOGANBERRY

The loganberry is generally larger than the blackberry, often an inch and a quarter long; color dark red and produced in immense clusters. It partakes of the flavor of both the blackberry and raspberry. Fruit ripens early; excellent for jelly or jam. June.

PRICES, not prepaid—Large, well rooted plants; Two year old, each 25c; 10 for \$2.25; 100 for \$20.00. One year old, each 15c; 10 for \$1.35; 100 for \$12.50.

DEWBERRY

Price, not prepaid, each 20c; per 10, \$1.50; per 100, \$12.50

LUCRETIA—Fruit large, soft, sweet; no hard core. Hardy, good for this coast. Last of May.

GARDENIA—Large glossy black; delicious heavy bearer; trailing vine. June.

BLACKBERRIES

PRICES, not prepaid, 2 years: Each, 20c; 10, \$1.75; 100, \$15.00



A Cluster of Cory's Thornless

HIMALAYA GIANT—(Evergreen)—An exceedingly strong rampant grower of a trailing nature; everbearing; an enormous yielder. The berries are large, juicy, coreless, sweet and firm, with a delicious aromatic flavor. Its deep-rooting qualities enable it to produce a large, firm berry even in a very dry season.

ELDORADO—A valuable new variety; fruit large, jet black, melting, sweet and rich; hardy and very productive; fine for Oregon.

THORNLESS MAMMOTH BLACKBERRY—(Cory)—It is a strong, vigorous grower; bears prolific; the canes grow thick and stout until about 5 or 6 feet long when they take the trailing habit, at which time they should be trellised.

It has a delicious flavor of its own, somewhat resembling the wild California blackberry. It is self-fertilizing—never been known to fail to bear.

Another very important feature is that it is almost seedless.

Cory's Thornless blackberries produce a good crop the first year after planting and come into full bearing the second year, when they yield from 5 to 7 tons per acre. They ripen about June 1st and continue to bear until about July 20th.

For the best results these berries should be planted on good land where there is plenty of moisture, in rows 8 feet apart and the vines 10 feet apart in the row. They should be put up on 2 or 3 wires from 2 to 5 feet from the ground.

Each 25c; 100, \$20.00

BURBANK'S THORNLESS—Is an absolutely thornless Himalaya with all the good qualities of that splendid variety and should be grown in exactly the same way. The Burbank Thornless should be trained on wires and pruned back each year the same as grapes. All sprouts and suckers from the base of the plant should be removed as fast as they appear.

When properly handled the Burbank Thornless Blackberry will produce immense crops of berries of the highest quality, splendid for canning and firm enough to stand shipping to distant markets. The fruit is medium to late in season and is borne in great clusters right up to frost time. Being entirely thornless, the expense and discomfort of gathering the fruit is reduced to the minimum.

Each 25c; 100, \$20.00

LAWTON—Fruit large; very productive; well and favorably known; Oregon's most popular kind.

CINNAMON VINES

They are from China—the land of wonders. They are a rapid grower and will cover porches and walls and their abundant blossoms perfume the air for long distances.

They are perfectly hardy and will thrive in all soils, in sun or shade, wet or dry. No insects or disease trouble them. Winter does not harm.

You certainly will be well pleased with them, include several with your order. Large Tubers.

75c Each



RHUBARB



PANAMA RHUBARB

THIS RHUBARB won the first prize at both the San Francisco and San Diego Expositions, and is being placed on the market at a price that should warrant extensive planting. As a rhubarb the Panama is unquestionably in a class by itself. Words cannot describe its wonderful flavor and the many other qualities that make it far superior to any other rhubarb. Panama is an everbearing rhubarb, growing continuously throughout the year, both summer and winter. Frost will not kill it, and in the absence of frost it will make its best and most profitable growth during the winter. It is a far cry from the superlative Panama to the ordinary Eastern and other varieties. In size it is more than twice the size, and the stalks are much heavier and larger, full grown stems often being three feet long and weighing two pounds.

FLAVOR—The flavor has been described as of the plum type, although due to its elusive taste, it is almost impossible to definitely fix it. Suffice it to say that a Panama rhubarb pie or sauce is so far superior to others, that comparison is out of the question. The Panama is comparatively free from acid, requires less than half the amount of sugar ordinarily used, and should not be peeled. All the roots are what is known as subdivisions.

CULTURE—The Panama is very easily grown. Plant not more than one-half inch below surface of ground, and water immediately after. Keep the ground well cultivated close to the plant within a radius of at least two feet from the plant. During the first two months irrigate once a week and cultivate after each irrigation. Plant from three to four feet apart in the row, and have rows from four to five feet apart.

PRICE—Each, 50c; Dozen, postpaid, \$5.00; per 100, F. O. B. Portland, \$40.00.

RIVERSIDE GIANT RHUBARB

RIVERSIDE GIANT is very favorably known and has stood the test of time, being crisp, tender, free from stringiness with a good color and a delicious, distinctive flavor. The skin is so thin that it disappears in cooking. Riverside Giant has every good quality of a commercial rhubarb and is so vigorous and productive that over thirty-five tons per acre is a conservative estimate for the season. Cuttings begin in March and usually four are made, the last one in July. Full information for preparation of the soil and growing the crop, as practiced by the originator, will be sent on request to all purchasers.

PRICE: Each, 15c; doz., \$1.50; \$10.00 per 100. Postpaid, each, 20c; doz., \$1.75. Special prices on large lots.

Don't plant rhubarb along a fence, near trees or other crops. Give plenty of room. Write for cultural directions.

VEGETABLE PLANTS—All Standard Varieties in Season—See Page 109.

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG



STRAWBERRY PLANTS



DIAMOND Quality Strawberry Plants are large, vigorous and healthy. They are heavily rooted and have large, full crowns; have been carefully grown and are free from disease and pests. We dig as ordered and pack for shipment in ventilated crates of 1,000 plants each. **They are grown from our select strains and are always true to name; no substitution is ever allowed** without instructions from the purchaser.

Our select strains of **New Oregon, Gold Dollar, Marshall, Magoon.**

NEW OREGON

Our Own Introduction

Best, Most Uniform and Heaviest Yielding Main Crop Strawberry

PRICE: \$8.00 per 1000. F. O. B. Portland.

"**NEW OREGON**" is large, firm and of fine form, averaging 15 to the quart box; color a brilliant, deep, rich red, having a glossy varnished appearance when fully ripe. This dark blood red coloring extends through to the very center, and, no matter how large, "**NEW OREGON**" is never hollow. When fully ripe the distinctive flavor is suggestive of the wild berry, is crisp and delicious, and will remain on the vine for three days without injury, keeping perfectly for many days after picking; stands handling and long shipments and will hold its color, shape and flavor when canned.

"**NEW OREGON**" is an early bearer, being ready for marketing the first half of May in the Willamette Valley and holds up in size and quality throughout the season, which in some localities extends until frost.

STANDARD VARIETIES OF STRAWBERRIES

GOLD DOLLAR—(*Extra Early*)—Gold Dollar berries are large size, dark red all through and have fine flavor. Foliage heavy, large and spreading, which protects the blooms from early frosts. Gold Dollar Strawberries are the standard early berry in the big markets of the Northwest and are always in demand.

MAGOON—Berry large, fine and of excellent sub-acid flavor; bears heavily; especially adapted to Western Oregon and Washington.

MARSHALL—Very large; dark crimson throughout; fine flavor; a fine market and table berry. Our stock is true, vigorous and prolific.

PRICES: All varieties except
Fall Bearing

Prepaid {	1 doz., \$0.30	Not {	25, \$0.40
	25, .50		100, 1.00
	100, 1.50		1000, 8.00

Not less than 500 plants of a kind at 1000 rate. Special prices on 3000 or more.

All our plants are officially inspected in the field by the State Horticultural officers and by our own inspectors.

FALL OR EVERBEARING STRAWBERRIES

Fall bearing Strawberries, also known as "Everbearing," are very satisfactory for home gardens and under some conditions will prove profitable commercially, but require special care and attention to secure best results as the late fruit will be small and yield less if the first blossoms are not removed and the plants are allowed to fruit early and continuously. When properly grown they are of splendid quality and yield heavily until frost.

PROGRESSIVE—Rich, red color, firm and of delicious flavor. Good keepers and shippers. Blossoms should be cut back about 4 weeks before the berries are wanted. We consider this the best of its class.

SUPERB—Considered by some as being the best of the everbearing, but in our experience they do not ship as well as the "Progressive" although they are a little larger when properly grown and the quality is fully equal to that of the best of the standard sorts.

PRICES: Postpaid, per doz. 60c; 25 plants \$1.00; 100 plants \$3.00
Not prepaid, per doz. 50c; 25 plants 75c; 100, \$2.50; 1000, \$18.00

Flavoring and Medicinal Herbs—Plants

CHIVE—Has mild onion flavor, grows in grass-like clumps; much used for flavoring.

Each 15c, doz. \$1.50

PEPPERMINT—Hardy perennial for producing oil.

Each 25c, doz. \$2.50

THYME—Broad leaved, used in soup, stuffing and sauce.

Each 25c, doz. \$2.50

LAVENDER—By distillation produces the well known Lavender water, the flowers for perfuming wardrobes, etc.

Each 25c, doz. \$2.50
Large clumps, each 50c


SAGE (Giant)—The leaves and tender tops are used in stuffings and sauce; also in the beverage known as Sage Tea. The Giant Sage is a greatly improved variety. Each 20c, doz. \$2.00



VEGETABLE PLANTS

WE grow large quantities of vegetable plants, and can supply all the kinds listed below, in their proper season, in most any quantity. We have made arrangements this year so that we can supply all vegetable plants in two grades. If you want a quantity of plants write us early.

Transplanted plants are much stronger and better rooted, and are well worth the price especially in the early part of the season. We can supply most any of the leading sorts. No plants sent C. O. D.

 All Prices Are Subject to Crop Conditions and Market Changes.

CABBAGE

Transplanted and "pulled" plants in all standard varieties. Early and late at seasonable times.

Prices	Postpaid	Not	Prep'd
	Doz.	100	1000
Transplanted.....	\$0.25	\$1.25	\$1.00 \$8.00
Not transplanted..	.15	1.00	.75 6.00

F. O. B. Portland

KALE

When you order Kale be sure to state whether you want the Garden Kale or the "Cow" Kale.


Prices	Postpaid	Not	Prep'd
	Doz.	100	1000
Thousand Head or "Cow Kale"....	\$0.20	\$1.25	\$1.00 \$6.00
Garden or Curley Kale.....	.25	1.50	1.25 10.00

Special prices on large lots in season.

BROCCOLI

Our famous "St. Valentine" Broccoli should be in every garden. Broccoli is a Winter cauliflower very hardy and of the finest quality — "St. Valentine" is the best variety; plants can be set after June and are ready to use in March.

Prices	Postpaid	Not	Prep'd
	Doz.	100	1000
Broccoli.....	\$0.30	\$1.50	\$1.25 \$12.00

 Write for prices on large lots. We will grow them to your order.

SWEET POTATO PLANTS

Sweet Potatoes can be successfully grown in most sections. The plants should be set out after the ground is warm. Rich, sandy bottom land is best, but any good garden soil will give good returns.

Prices	Postpaid	Not	Prepaid
	Doz.	100	Doz. 100 1000
For seasonable delivery.....	\$0.35	\$1.50	\$0.25 \$1.25 \$10.00

HARDY IRIS

Hardy Iris is one of the best of the early spring flowers, is hardy everywhere, and if planted in a moist situation or watered freely, will produce magnificent orchid-like blooms of great size and delightful fragrance. Comes in charming color effects in blues, browns, yellows, purples, white.

AUREA—Rich chrome-yellow. The finest pure yellow.

FLAVESCENS—Delicate shade of soft yellow; prolific bloomer. Very good for borders. Height 30 inches.

FLORENTINA ALBA—An excellent variety for cutting and an early bloomer. Flowers ivory white tinged with lilac. The Orris Root variety of commerce.

HER MAJESTY—A rich dark bronze color of great beauty.

INGEBORG—Pure white; very large flower.


LOHENGRIIN—Beautiful Cattleeye rose, a large graceful flower.

JAPANESE IRIS—(*Iris Kaempferi*)—Stock limited. Write for prices.

CAULIFLOWER


Cauliflower seed is scarce and high in some varieties and plant prices subject to change.

	Postpaid	Not	Prep'd
	Doz.	100	1000
Early Varieties, transpl'ted..	\$0.30	\$1.75	\$12.00
Not transplanted.....		1.25	10.00
Late kinds, transplanted.....	} Write for prices		
Late kinds, not transplanted....			

 Add 15c per hundred if ordered by mail.

CELERY

Fine, healthy plants in early Winter varieties furnished in season or grown to order.

 To succeed with celery keep the plants growing constantly while young—if they "stand still" they are liable to run up to seed later.

Prices	Postpaid	Not	Prep'd
	Doz.	100	1000
Transplanted.....	\$0.30	\$1.25	\$1.00 \$8.50
Not transplanted.....	} Write for prices		

TOMATOES

Tomato plants should not be set out before the weather is settled and ground warm; unless they are protected from frost.

If you do not know what variety is best tell us, we will give you the right one.

Prices	Postpaid	Not	Prep'd
	Doz.	100	1000
Transplanted.....	\$0.30	\$1.50	\$1.25 \$10.00

Write for prices on "pulled" plants and large lots, grown to order.

BRUSSELS SPROUTS

These are very hardy and should be grown the same as Kale or Broccoli.

Prices	Postpaid	Not	Prep'd
	Doz.	100	100 1000
Brussels Sprouts.....	\$0.25	\$1.50	\$1.25 \$10.00

MADAM CHEREAU—Large white, dainty frilled blue edge.

PALLIDA DALMATICA—Extra large, lovely true lavender, delightful fragrance, free flowering, fine for massing or as a cut flower.

PRES. THIERS—Mauve. Base striped brown and white.

QUEEN OF MAY—This is very satisfactory and well adapted everywhere. It is a soft rosy lilac, almost pink.

WALHALLA—Lavender; wine red.

Strong Roots, each 25c; per dozen \$2.50



DIAMOND FERTILIZERS

The Base is Bone Meal and Tankage—No Cheap Filler. Every Pound is Good Fertilizer



DIAMOND QUALITY Fertilizers are complete fertilizers of the highest grade and concentration, no inferior ingredients or cheap fillers are used in their preparation, Bone Meal and Tankage forming the base to which is added the necessary Potash, Nitrogen and Phosphoric Acid. Each package is marked plainly, showing the percentage of available plant food.

SPECIAL FERTILIZER BOOKLET giving complete details and prices of the different fertilizers which we can supply, together with full information for their application, will be sent on request. This booklet is instructive, reliable and of great value to all interested in fertilizers.

FERTILIZERS IN SMALL GARDENS

Amateur garden makers are often puzzled as to the amount of fertilizer needed for their small plots, because the usual directions give only the amount per acre. The following table shows (approximately) the proper proportions:

100 lbs. per acre equals 1 lb. for a plot 10 x 43 ft.
200 lbs. per acre equals 1 lb. for a plot 10 x 21 ft.
300 lbs. per acre equals 1 lb. for a plot 10 x 14 ft.
400 lbs. per acre equals 1 lb. for a plot 10 x 11 ft.
500 lbs. per acre equals 1 lb. for a plot 10 x 9 ft.

Applied in quantities of 1,000 lbs. to a ton per acre, our fertilizers, with intelligent culture will sustain and gradually improve the soil and increase the yield and quality of the product, even though the crop be entirely removed and no other manuring done. The roots, vines, stubble and whatever of weeds or waste there is, all assist in providing the necessary humus. A greater amount is often used to advantage by market gardeners. Complete instructions will be found in our Fertilizer Booklet, sent free. If there is any special information you require, write us; your inquiries will have our prompt and careful attention and our experience may help you.

A 100-Pound Bag of High Grade Commercial Fertilizer will contain more soluble and available plant food than 4,000 pounds (two tons) of stable manure of average quality. How much easier and cleaner to handle one 100-pound bag than 2 tons of manure, and there are no weed seeds to worry over. Always remember that the commercial value depends upon the available or soluble contents of a mixed fertilizer, and the price is governed thereby. The figures giving the soluble, insoluble, totals, etc., unless understood, are often misleading apparently giving a greater percentage of the various elements than are actually available.

The amount of commercial fertilizer used in the West is exceedingly small as compared with the amounts used in the East and Middle West. This is probably due to the prevailing belief that commercial fertilizers are not necessary in this section and also due to the fact that their importance and benefit are not understood or appreciated. Each year the growing crops take from the soil hundreds of pounds of Nitrogen, Phosphoric Acid and Potash, and it should be obvious to all that ultimately the quantity remaining will be so small as to make profitable cropping impossible. The importance of maintaining soil fertility by replacing annually the chemicals removed by the growing crops should not be overlooked, and as the amount of stable manure available is entirely inadequate, the sooner the grower decides to make up the deficiency by the application of high grade commercial fertilizers the sooner will he check the annual loss of fertility and bring his land back to its original fertility.

—VALUE OF "DUSTING SULPHUR"—

THE most common fungous diseases that annoy the gardener and orchardist are Mildew on climbers and roses or flowers, Early Blight on potatoes, Scab on apples and pears, and Brown Rot on peaches. **DUSTING SULPHUR** is good for all these.

This superfine sulphur, which will readily pass a sieve equal to more than 40,000 holes to the square inch, is the only sulphur sufficiently fine for use in Dust Mixtures. This excessive fineness means greater covering power, more complete and uniform distribution, and consequently better disease control. See **Index**.

Note AS FERTILIZERS ARE SOLD ON A SMALL MARGIN, PRICES ARE SUBJECT TO MARKET CHANGES, but you will always get **FULL VALUE** for your money

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG

DIAMOND PLANT FOOD

For Ferns, Palms and House Plants. Clean, Odorless,
Highly Concentrated.

A complete, highly concentrated, powerful fertilizer, clean and odorless, wonderfully invigorating to all plants: producing luxuriant foliage and larger and more brilliant flowers.

A 40c package will feed a dozen large plants a whole year. Special instructions on each package.

Price: $\frac{1}{2}$ lb. pkg. 25c, by mail 35c; 1 lb. pkg. 40c, by mail 50c

PRICES, FERTILIZER, F. O. B. PORTLAND, OREGON



GENERAL AND VEGETABLE

An all-round fertilizer, which can be used on any crop, but is especially adapted for grain and general farm crops. Analysis: Nitrogen, 4 per cent; phosphoric acid, 8.25 per cent; potash, 3.50 per cent.

10 lbs. 50c, 100 lbs. \$2.75, ton \$53.00

FRUIT AND ONION FERTILIZER

This fertilizer is also used for blackberries, raspberries, etc. We sell large quantities for growing the famous Hood River strawberries. Analysis: Nitrogen, 3 per cent; phosphoric acid, 8 per cent; potash, 9.50 per cent.

10 lbs. 50c, 100 lbs. \$2.35, ton \$55.00

ODORLESS LAWN AND ROSE

Our Diamond Lawn Fertilizer promotes a vigorous, healthy growth, giving the desired dark rich green appearance; can be used at the time the seed is planted and later as a top dressing. One hundred pounds is sufficient for an ordinary city lot, and is far more effective and less objectionable than stable manure. Remember, it contains no weed seeds. When used as a top dressing it is best to make several light applications about two weeks apart.

10 lbs. 50c, 25 lbs. \$1.00, 50-lb. sack \$1.80,
100 lbs. \$3.25, ton \$60.00

BONE MEAL

Fine ground, is one of the best fertilizers. This is a very valuable enricher of the soil, and one of the most economical at present prices.

5 lbs. 30c, 10 lbs. 50c, 100 lbs. \$3.25, ton \$60.00

SHEEP GUANO

The best natural manure, dried and ground. Concentrated, soluble; quick in action, and free from weed seed. Splendid for vegetables; fine for roses and flowers. Excellent for lawns.

10 lbs. 40c, 25 lbs. 75c, 50 lbs. \$1.00, 100 lbs. \$1.75, ton \$32.50

LAND PLASTER, OR GYPSUM

Made from pure gypsum, free from clay or other foreign matter. This is especially valuable for clover crops.

10 lbs. 25c, 100-lb. sack \$1.25, ton \$20.00

ASK FOR FERTILIZER BOOKLET AND SPECIAL INFORMATION REGARDING SULPHUR.

PLANT more PERENNIAL FLOWERS

SUPERPHOSPHATE

This is a concentrated form of phosphoric acid, and it is actually the cheapest form in which to buy phosphoric acid. Our present stock contains 17 to 18 percent available phosphoric acid.

Per lb. 5c, 100 lbs. \$2.00, ton \$37.00

TANKAGE

Ground meat scraps and bone, dicated in a vacuum, is very rich in phosphoric acid and nitrogen. Per 100-lb. sack \$3.25, ton \$60.00

NITRATE OF SODA

For immediate results Nitrate of Soda is the very best for stimulating and forcing the growth of plants or any other crop.

1 lb. 10c, 100 lbs. \$3.50, ton \$68.00

FISH GUANO

Fish cooked, dried and ground is a strong fertilizer, rich in nitrogen, carrying considerable phosphorus and largely used by vegetable growers. We do not recommend this for lawns or city use, as odor is objectionable

100 lbs. \$3.75, ton \$70.00

POTASH

KAINIT is an imported potash salt containing 12 to 14 percent of potash. A good fertilizer for all crops except tobacco.

100 lbs. \$2.25, ton \$40.00

MURIATE—Carrying 50% and upwards actual Potash. 100 lbs. \$4.00, ton \$80.00

SULPHATE—Carrying 50% actual Potash and no chlorine. 100 lbs. \$4.50, ton \$80.00

H. O. LIME

A blended mixture of Raw Ground Limestone and Hydrated Lime. Much more effective than Raw Ground Lime Rock, and practically goes twice as far. Specially recommended for Sour Soils. 100 lbs. \$1.50, ton \$28.00

LIME

LIME ROCK—Fine Ground.—This is the form of lime recommended by the Agricultural Department. Use $\frac{1}{2}$ to 1 ton per acre.

100 lbs. \$1.00, ton \$18.00



SULPHUR FOR ALL PURPOSES

To Increase Crop Yields

Experiments conducted during the past few years by noted soil chemists and practical cultivators have revealed that sulphur—

1. Is readily utilized by plants as stimulating food.
2. It improves alkali soils by neutralizing the alkali which rises to the surface or which is carried in by the irrigation water.
3. Promotes nitrification: Dr. F. C. Reimer, in Oregon Agricultural Bulletin No. 163, says, "The various sulphur fertilizers have a very stimulative effect on the root system, increasing its size and the number of nodules. This is of great value in taking up larger quantities of plant food, moisture and atmospheric nitrogen."
4. Transforms latent potash and phosphates into available plant food.
5. Increases protein and feeding value of crops.
6. Destroys the spores of Fungi and larvae of injurious insects in the soil. Has prevented potato scab, wire worms, eel worms or nematodes, ants, smutty grain, etc.

Drill into the soil 200 to 400 pounds per acre of "TORO" Brand.

\$5.00 per 100 pounds.

Write for Prices in Quantities



ANCHOR BRAND VELVET FLOWERS OF SULPHUR

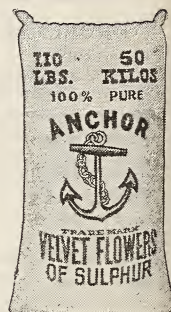
For Dry Dusting of Trees, Vines, etc., Bleaching Fruit, etc.

It has been proven and so recommended by the University of California that if you sulphur your grape vines and orchards SIX times they will not be affected by MILDEW or RED SPIDERS.

Anchor Brand Velvet Flowers of Sulphur, also Eagle Brand, Fleur de Soufre, packed in double sacks, are the fluffiest and PUREST sulphurs that money can buy: the best for vineyards; the best for bleaching purposes, LEAVING NO ASH.

VENTILATED Sublimed Sulphur—Impalpable Powder, 100% pure, in double sacks, for Dry Dusting and Making Paste or wettable Sulphurs.

\$5.00 per 100 pounds. Write for Prices in Quantities.



For Lime-Sulphur Solution, Fertilizing, and General Purposes, Use Our

DIAMOND "S" BRAND REFINED FLOUR SULPHUR



SULPHUR, The New Fertilizer—Recent field experiments in the Northwest have demonstrated the fact that Sulphur is one of the most valuable fertilizing materials that can be applied to the soil, not only being readily taken up as a powerful stimulant by practically all classes of vegetation, but having the further and more valuable property of making available the insoluble potash and phosphoric acid contained in all soils as well as being an effective fungicide and insecticide. We offer agricultural Sulphur in two forms:

DIAMOND S SULPHUR—Finely powdered and 100% pure. Price 100 lbs. \$3.00. Write for Prices in Quantities.



SPRAYS, INSECTICIDES

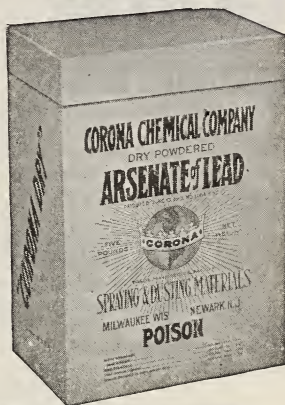
NOTE—*Poisonous Sprays marked * cannot be mailed.*

★“CORONA” Arsenate of Lead—DRY POWDERED

Contains only Arsenic and Lead Oxides. No Fillers
MIXES QUICKLY AND EASILY. STAYS MIXED LONGER
AND STICKS better to leaves, branches and fruit
 than **ANY OTHER** Arsenate.

“CORONA” Dry Powdered Arsenate is a light, fluffy powder that cannot freeze, dry out, cake or lose its strength—carries the highest possible percentage of arsenic oxide, 33%—is always uniform and requires only one pound to 50 gallons of water. *Efficient, economical and convenient. Highest percentage of killing power.*

Prices, $\frac{1}{2}$ lb. 25c, 1 lb. 40c, 4 lbs. \$1.25, 10 lbs. \$2.50,
 1 Case 12-4 lb. pkgs. \$10.60



Caution Against Spraying When Trees are in Full Bloom—*Spraying when trees are in bloom may destroy bees and other insects necessary to pollinate, and these natural agents should not be interfered with as their work of transferring the pollen insures beautiful crops and shapely fruit.*

FOR DUSTING—“CORONA” DRY used as a dust spray is a safe, inexpensive, easily applied and efficient remedy for all chewing garden pests—and for use on fruit trees, berry bushes and plants—that will insure perfect fruit and clean vegetables.

“Garden Pests and their Control” and full information about “CORONA” mailed on request

Use “CORONA DRY” in Your Vegetable Garden

TOMATOES—For tomato worms, flea beetles, etc., make first application two weeks after setting out the plants.

CUCUMBERS—All chewing insects that injure cucumbers are quickly destroyed by dusting leaves and stems above and below. Corona Dry will not burn the foliage as Hellebore does.

POTATOES—Corona Dry is fatal to flea beetles and all chewing insects that damage the foliage. Mixed half and half with Dusting Sulphur will control and prevent early blight.

Choose a bright day with a light wind and apply the powder from the windward side. It is not necessary to have the foliage appear white but care should be taken to cover all parts. **Begin Early.** Don't wait until the damage is done.

CABBAGE, CAULIFLOWER AND KALE—To control cabbage worms, dust about ten days after plants are set and as often as necessary until they begin to head. **Do not use any poisons on plants after they start to head.**

SWEET CORN—The corn ear worm develops from an egg on the new silk or husk and feeds on the silk, following it into the ear. “Corona Dry” gives absolute control of this pest. Thoroughly dust the new silk as soon as it appears.

CORONA COPPERCARB. See page 54

LEE'S GARDEN INSECTICIDE—(Non poisonous)—This is a new addition to the famous “Lee Line” of insecticides. We recommend “Lee's Insecticide” as one that is suited to the needs of the average gardener, and one that is guaranteed to give satisfaction.

1 lb. sprinkler top can, 35c. 2 lb. sprinkler top can, 60c.

CARBOLINEUM—AMERICA—Wood Preserver—This is the pure CARBOLINEUM, used for preserving any kind of timber above or below ground. Painting roofs, fence posts, farm buildings, chicken houses and roosts to prevent mites and other pests.

Quart Can 60c, weight 4 lbs.; gal. \$2.00; 5 gals, \$7.50

***LION DRY BORDEAUX MIXTURE**—Dry Powdered Bordeaux when mixed with cold water in the proportion of nine pounds to fifty gallons, gives a standard Bordeaux Mixture. Keep in a tightly closed package.

Price: 1 lb. 40c, 5 lbs. \$1.50, 25 lbs. \$4.50, 50 lbs. \$8.50, 100 lbs. \$16.00, 200 lbs. \$30.00.



SULPHUR—FOR DUSTING—Use the **ANCHOR Brand.** See page 112

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG

Sprays, Spray Material, Washes—Continued



For destroying and preventing maggots, grubs and worms that infest turnips, radishes, beets, rutabagas, cabbage and cauliflower, etc., also recommended for combating crown borers in strawberries. $\frac{1}{2}$ pt 50c, pt 75c, qt \$1.25 gal \$2.75

Portland Seed Company's APHISCIDE

Our Best Summer Spray for Roses

A clean, efficient spray for aphid, thrip, and kindred insects on plants of any kind. Specially fine for house plants, as it has no offensive odor and will not injure or stain the plants.

Price qt. 35c, gal. 65c



Reg. U. S. Pat. Off.

BUG DEATH—A non-poisonous insect-killing powder that is in high favor among gardeners for cabbage, tomato and cucumber bugs, etc. Use 12 lbs. per acre. Per lb. 35c, 5 lbs. \$1.00.

BUHACH—Oz. 30c, $\frac{1}{4}$ lb. \$1.00, 1 lb. \$1.75

TREE TANGLEFOOT—For caterpillars, moths and worms. Protects against all climbing insects. One pound makes a band 9 feet long. Price 1 lb. 50c, 5 lbs. \$2.25, 10 lbs. \$4.00, 20 lbs. \$8.00.

HAMMOND'S SLUG SHOT—For destroying slugs, cabbage and turnip flea, currant worms, etc. Per 5-lb. pkg. \$1.20

HAMMOND'S GRAPE DUST—To prevent mildew on roses, grapes, and gooseberries. Per 5-lb. pkg. \$1.50

PURITAN LIME

A specially manufactured and highly refined lime product for household and other uses. Can be used as a whitewash or for any purpose where a slack lime is desired

Price per pkg. 50c
CREOLA

A white disinfectant paint in dry powdered form.

Ready to use when mixed with cold water. Excellent for use in chicken house, stable, dog house, hog house, dairy, etc. Keep the interior of your buildings clean.

Price per pkg. 75c



NICO-FUME—The best fumigant and spray for greenhouse work. Kills aphid, red spider, mealy bug, thrip, etc.

$\frac{1}{4}$ lb. 75c, 1 lb. \$2.25, 4 lb. \$8.00, 8 lb. \$15.00

A SUCCESSFUL REMEDY FOR CABBAGE MAGGOT

*"BLACK LEAF 40"

40% Nicotine

Destroys Aphis, Thrips, Leaf Hoppers on all tree, bush and vine fruits, vegetables, field crops, flowers and shrubs; also Apple Red Bug, Pear Psylla and similar soft-bodied sucking insects—all without injury to foliage. Combines readily with other sprays.

1 oz. 6 gals. spray... \$0.35

$\frac{1}{2}$ lb. 40 to 120 gals.

spray..... 1.25

2 lb. 160 to 500 gals.

spray..... 3.00

10 lb. 800 to 2500 gals. spray..... \$13.50

*CUT WORM FOOD

Use a Teaspoonful to a Plant or Hill

Cut worms are very fond of this special preparation which is eagerly eaten by them in preference to the plants. A careful test proved 95 per cent of the applications effective on Melons, Cucumbers, Cabbage, Cauliflower, Squash, Tomato and Flowering Plants. Easily applied by sprinkling around the plants and will not injure them in any way. Price, 1-lb. pkg. 50c, 5 lbs. \$2.00

BLUE LABEL SLUG DESTROYER

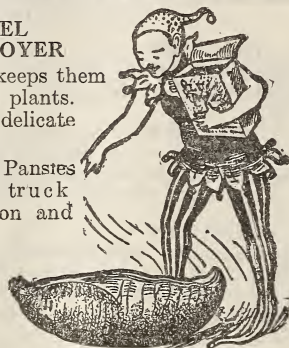
Kills slugs and keeps them away from young plants. Not harmful to delicate foliage.

For Sweet Peas, Pansters and all garden truck sprinkle lightly on and around the plant.

Price

$1\frac{1}{2}$ lb. pkg. 25c

6 lb. pkg. 75c



*BLUESTONE—(Vitreol)

Lb. 20c, per 100 lbs. market price

***PARIS GREEN** (Lion Brand)—The standard of purity. Guaranteed superior to other makes.

Price, $\frac{1}{4}$ lb. 25c, $\frac{1}{2}$ lb. 40c, 1 lb. 75c

FISH OIL SOAP—For aphid, plant lice, etc.

Per bar 20c, 100 lbs. bulk \$12.00

TOBACCO DUST

Lb. 15c, 10 lbs. \$1.25, 100 lbs. \$10.00

You can control

ROOT MAGGOT

Absolutely Protects
CABBAGE, RADISHES,
TURNIPS, ONIONS, Etc.

A Positive Remedy for Root
Maggot

PRICES, 2 lbs. 35c, 4 lbs. 60c, 8 lbs. \$1.00, 25 lbs. \$2.50



DRY LIME SULPHUR

Controls all scale and fungus diseases for which Lime-Sulphur Solution is recommended. More convenient to handle and saves freight on water. Put up in air-tight packages which should be used when opened. For Winter spray use ten to fourteen pounds to fifty gallons of water. For summer in combination with Arsenate of Lead use two to three pounds to fifty gallons of water.

Price: 1 lb. 25c, 5 lbs. \$1.00, 10 lbs. \$1.80, 25 lbs. \$3.75, 100 lbs. \$12.00.

DIAMOND LIME AND SULPHUR SOLUTION

For San Jose Scale

You cannot afford to risk a cheap, open kettle product. Be safe. Use the best.

Diamond Lime and Sulphur Solution is prepared in pressure tanks by steam, and is always uniform and of the highest efficiency tests 30 Baume Scale, is made of the purest and best quality of Sublimed Sulphur and of Lime, is a clear, deep cherry colored liquid, free from sediment, and is all ready to mix just as you get it. Merely add eleven gallons of water with each gallon of the Lime and Sulphur Solution. There is no sediment to clog the sprayers. No boiling to be done, which saves fuel, time, labor and annoyance. It is always alike and uniform in strength and results.

Price: 1 qt. 30c, 1 gal. 75c, 5 gals. \$2.40, 50-gal. bbl. \$12.00 f. o. b. Portland.

DIAMOND SPRA-OIL

SPRA-OIL is a miscible oil spray manufactured at Hood River, Ore., and has been used by the big commercial orchards in that section with the greatest success, especially in spraying for leaf roller.

As a **SUMMER SPRAY**—Very efficient for young San Jose Scale and certain Aphis, when diluted with 50 to 100 gallons of water to one gallon of Spr-Oil—depending on the foliage, which, if very tender, should be sprayed with a weaker solution than 1 to 50.

As a **WINTER SPRAY**—For San Jose Scale, Pear Scylla, Leaf Roller, Woolly Aphis, use one gallon of Spr-Oil to 15 or 16 gallons of water.

Directions for Diluting—Shake and stir well while in the original package; after this, mix with one part of water to one part of Spr-Oil, which will readily emulsify to a creamy consistency. When this is thoroughly mixed, put it in the spray tank and it will stay in suspension.

Price: qt. 40c, gal. 95c, 5 gals. \$3.50, 10 gals. \$6.50, bbl. \$22.00 f. o. b. Portland.

CASEIN SPREADER

It pays to use a good spreader when spraying, and Casein lime spreader is the best yet. Ready to use, no cooking, no odor, cost trifling. For a thoro job use it and it sticks in spite of rain. Write for descriptive matter.

Price: 1 lb. carton 25c, postage extra; 100 lbs. with measure \$11.00 f. o. b. Portland.

FORMALDEHYDE

**Will Prevent Oats Smut,
Stinking Smut of Wheat, Barley Smut
and Leaf Stripe**

Use one pint formaldehyde in 40 gallons of water for wheat and barley. Spray oats with one pint formaldehyde in 10 pints of water. For Potato, Scab soak the potatoes for two minutes in a warm solution (118° to 122° F), one pint in 15 gallons of water; small lots on the stove in wash-boiler; larger lots in tank heated with tank heater and large lots in tank heated by steam from tractor or other boiler. Full directions on application.

Pts. 60c, Qts. \$1.00, Gal. \$3.25

ONION SMUT

This disease lives in the ground. It appears on the young plants, which are stunted, as numerous blisters which are filled with a black powder. If necessary to use infected land, apply solution in drill 1 pint to 16 gallons water, after dropping the seed and before covering it, at the rate of 1 gallon solution to 85 feet of row. (12 pints Formaldehyde to 200 gallons water per acre). Onion sets are not subject to smut injury.

CABBAGE DISEASES

Brown or black-rot cabbage is a bacterial disease. Club-root is a slime mold disease. Fusarium wilt, known also as "yellow," Black leg, known also as wilt, fungus diseases. Treat all seed just previous to planting. Soak for twenty minutes

in a solution of one part formaldehyde to 320 parts water or 1 teaspoonful to 1 pint of water.

CUCUMBER ROOT ROT

Thoroughly wet soil with Formaldehyde solution: 1 pint to 12½ gallons of water. Wait several days before planting.

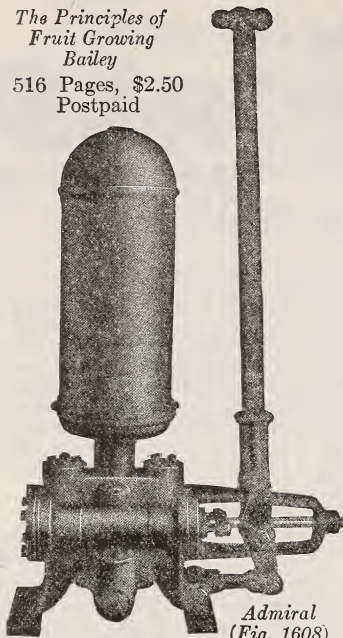
LETTUCE ROSETTE AND ROT

Wet soils in green houses or out of doors two weeks before setting of plants with one part Formaldehyde to 100 parts of water, using one gallon to each square foot of surface.



*The Principles of
Fruit Growing*
Bailey

516 Pages, \$2.50
Postpaid



*Admiral
(Fig. 1608)*

Gould's Spray Pumps

We are General Agents for the Gould Sprayers, guaranteed to be the best built, most lasting and of the highest efficiency. They are the recognized standard.

GOULD'S "ADMIRAL" DOUBLE ACTING SPRAYER

For Large Orchards, Parks, Groves, Etc.—Very Powerful

The "Admiral" is double acting and produces a steady stream at the nozzle, is built for continuous hard work and high pressure. Especially designed for large orchards, and will meet every requirement. The brass cylinder lining is of heavy seamless tubing, with a cast bronze cylinder head, and can be easily removed. The valves are all brass, and each one in a separate valve box. They are easily reached by removing the bronze valve box covers. The brass piston rod is outside guided, making a perfectly straight thrust through the stuffing box, which is outside packed. Capacity four leads of hose, and will be found fully as serviceable as a power sprayer and one of the best spray pumps for power outfit.

Outfit A—Pump only, strainer and suction hose couplings \$42.50

Outfit B—Pump with 8-foot suction hose and strainer... 46.50

Outfit C—Pump with 8-foot suction hose, two 25-foot leads, best spray hose, two 8-foot bamboo extensions, with Globe valves and nozzles..... 64.00

Admiral Pump with 3-inch cylinder furnished on any of above outfits for \$4.00 extra.

Pitman to connect Admiral for power.

Extra, \$1.25

MONARCH TWO-CYLINDER SPRAY PUMP

Fig. 1640—Monarch—This pump has many advantages and we believe it is the best of the large pumps. The main advantages are: First, the long lever, which can be shifted to pull or push, or to lift or drop, and can be changed by the operator any time he desires a relief; second, pump stands outside of the barrel, and all parts can be easily looked after; third, cylinders are perpendicular, and any grit will not lie against the plunger, to wear it or the packing out, as in the case with the horizontal cylinders; fourth, there are no valves in the plungers; the packing is on the outside, and can be tightened any time, without taking anything to pieces; fifth, the four brass valves (each one by itself and under a separate cap) can be reached by merely unscrewing the cap, and without disturbing the rest of the pump.

Outfit A—Pump only, 2-inch cylinder, including strainer and hose connection..... \$40.00

Outfit B—Coupled with 6 feet $\frac{3}{4}$ -inch suction hose..... 42.00

Outfit C—Pump, suction hose, 25 feet best spray hose, 8-foot bamboo extension, Globe valve and nozzle..... 50.00

If $2\frac{1}{2}$ -inch cylinder is wanted add \$5.00 to price of pump.

FIELD CROP OR POTATO SPRAYER

A practical four-row adjustable attachment including nozzles, for use with any barrel or power pump. A first-class outfit built for service. **Price Complete \$15.00**

TAKE CARE OF YOUR SPRAYER—

Always empty remaining solution, and pump through clean water after using. Clean thoroughly before putting away at end of season.

Never leave sprayers containing liquid where they will freeze; if cylinders are iron they are apt to crack and if brass they will expand.

*Monarch
Fig. 1640*



*"Corona
Dry"*

is the best

*Arsenate
of Lead*

*for Spraying
or Dusting*

*See
Page 113*

Spray Pumps and Sprayers—Continued

GOULD'S STANDARD SPRAYER

Powerful, Large Capacity, Durable

The "Standard" Sprayer is made with a 2½-inch cylinder. The cylinder is brass-lined, the plunger brass-encased and the valves are brass, making all working parts proof against the spraying mixtures. The plunger is easily repacked without taking the sprayer to pieces, and is unusually large, known as a "differential" plunger, which produces a continuous stream of liquid from the nozzle, similar to a double-action pump. The large standard provides an ample air chamber. The base is made so as to fit either the end or side of a barrel.

Outfit A—Pump and strainer only.....\$12.50

Outfit B—Pump with agitator and suction pipe..... 14.00

Outfit C—Same as B, with one 15-foot lead of hose and nozzle. 18.25

Outfit D—Same as C, with two 15-foot leads of hose and nozzle. 22.75

Outfit E—Same as D, with 2 bamboo extensions and globe valves 27.50

We supply a barrel and mount sprayer for \$2.50 extra.

GOULD'S POMONA—Our Leading Barrel Pump

Fig. 1100—"Pomona" Spray Pump has won for itself an enviable reputation. We unhesitatingly offer it as the best orchard spray pump for mounting in a barrel. It has great power and capacity. Briefly stated, other points of superiority are: No leather packings, consequently no hardened and useless valves. All working parts bronze,

including plunger, gland, valves, valve seats, etc. Plunger is outside packed. Valves are easily accessible. Air chamber is very large and of steel, free from imperfections of cast iron. Lever long and powerful, with adjustable stroke, 3, 4 or 5 inches. The agitator, as shown in the cut, is operated by the stroke of the handle, so whenever any liquid is pumped it is thoroughly agitated. Pump is held securely by small anchor located at bottom of barrel, and by adjustable clamp plate at the top. New plate admits insertion or withdrawal from barrel without removing the agitator.

Outfit A—Pump only.....\$25.00

Outfit B—Pump with 12½ feet best spray hose, one Vermorel nozzle, one 8-foot bamboo extension with cut-off, complete..... 31.00

Outfit C—Same as Outfit B, except we furnish a good hardwood barrel and mount the outfit..... 33.50

Outfit D—This is our regular Pomona outfit, the best barrel pump outfit that can be bought. It consists of one No. 1100 pump with two 12½-foot leads of best spray hose, two Vermorel or Seneca nozzles, two 8-foot bamboo extensions, with cut-off; all in working order and mounted in barrel.....\$39.00

FRUITALL

Fig. 1188—"Fruitall" Spray Pump is made on the same general lines as our famous "Pomona." It is, however, made lighter and of smaller capacity. All working parts, including plunger, gland, valves, valve seats and strainer are made of brass. Pump is held in barrel by anchor at bottom and adjustable clamp at top, fitting over end of stave. Not made for side of barrel.

Outfit A—Pump only.....\$16.50

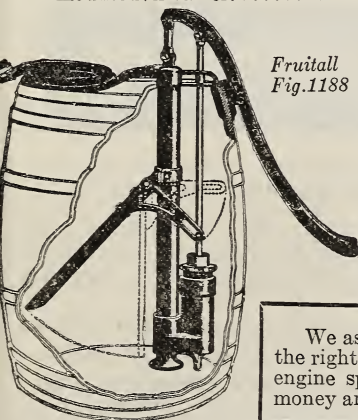
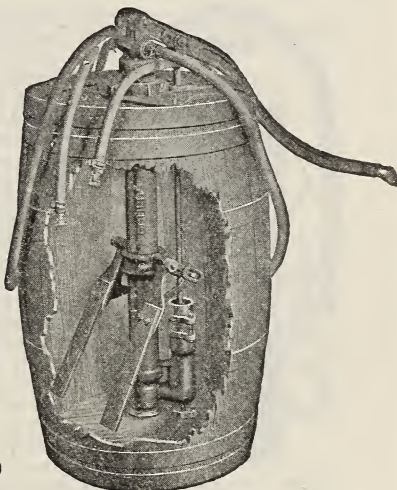
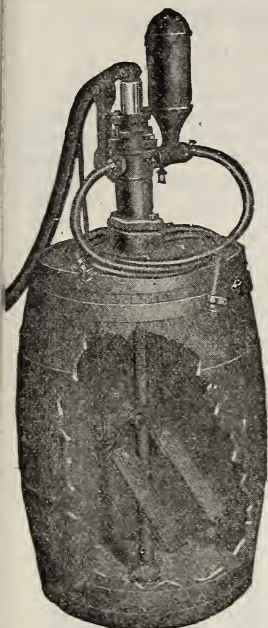
Outfit B—Pump with 15 feet of spray hose and one Vermorel nozzle, all complete..... 21.00

Outfit C—Pump mounted in barrel, 15 feet hose, 8-foot bamboo nozzle and cut-off, all complete..... 26.50

NOTE—Extra spray hose at 17½ cents per foot.

POWER OUTFITS

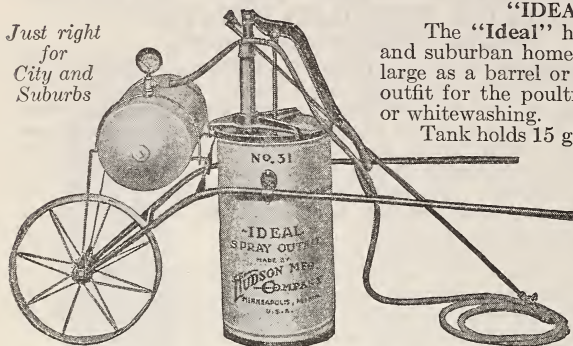
We assemble outfits in any manner desired by customer and suggest the right attachments for special purposes. Attaching any standard engine specified. Write us your requirements. We can save you money and guarantee a satisfactory equipment.



Fruitall
Fig. 1188

SPRAY PUMPS AND SPRAYERS—Continued

Just right
for
City and
Suburbs



"IDEAL" SPRAYING OUTFIT

The "Ideal" has been designed for small growers, city and suburban homes, and for all purposes where nothing as large as a barrel or power outfit is needed, and is the right outfit for the poultryman who does much regular spraying or whitewashing.

Is Light, Compact, Easy to Operate.

Tank holds 15 gallons; will not clog or spill. Has 20-inch wheel, 2½ inch tire. Pump has large air chamber. Bronze ball valves; valves are removable, cannot clog. Well made; gives a pressure of 275 pounds, has mechanical agitator and strainer for suction. Outfit complete, 10 feet, ¾-inch hose, 8-foot extension in two pieces, one T-handle shut-off, one "Ideal" nozzle; shipping weight, crated, 130 pounds. **Price \$37.50**

BROWN'S AUTO SPRAY



The Auto-Spray No. 1 is strong and simple in its working parts. Two pumpings of about fifteen strokes on the plunger will discharge contents under high and constant pressure. The Sprayer is equipped with our patent non-clogging nozzle.

The Solution Tank holds about four gallons and is made of galvanized steel or heavy sheet brass. We recommend brass as it will not corrode with strong solutions and is more lasting.

The brass air pump, made of seamless tubing, is provided with our Cam Locking Device which closes the filler opening airtight with a half turn of the pump handle.

Made without screws or bolts. Easy to take apart.

Valves and washers resist oil and other solutions that attack rubber. Diameter, 7 inches; height, 2 feet; capacity, 3½ gallons; weight, empty, 7 pounds; weight, loaded, 39 pounds; shipping weight, 15 lbs.

Price, galvanized with auto pop nozzle, \$6.50, brass, \$9.00.

The Junior Sprayer is made for the man who needs a high pressure compressed air sprayer. It is particularly adapted for the backyard garden or small truck farm, for use around the chicken house, in the dairy barn, hog pen, or for disinfectants in hotels, restaurants, theatres and other public buildings. It will do any work the larger models can, for it differs from them only in capacity. It is substantially made and will give entire satisfaction. Capacity about 2½ gallons. Shipping weight, 9 lbs. Galvanized Tank, \$5.25 All Brass Tank, 8.25



Junior

ACME COMPRESSED AIR SPRAYER

Made of strong galvanized steel or brass with locked seams tested to 60 pounds air pressure. Brass pump-seat, bronze ball check-valve easily removable, seamless brass cylinder 1½ inches in diameter, solid brass, non-corrosive, self-cleaning nozzle with spiral point, producing whirling spray, an exclusive patented feature producing a finer and better spray than any other pressure sprayer. Capacity 3 gallons, adjustable carrying strap, 3-foot extension. Shipping weight 11 lbs.

Price, brass, \$8.90. Price, galvanized, \$6.25

ACME SINGLE POWDER BELLOWS



Fig. 20. Excellent for blowing powder on vines and bushes; good size, and works fine. Weight 2 pounds. **Price \$1.65**

HANDY DUST SPRAYER

Made of heavy tin. Resembles a liquid sprayer. One of the most effective dust sprayers made. Will give satisfaction. **Price 65c**

SPRAYING to be effective MUST BE WELL DONE—
Gould Spray Pumps will give and maintain the necessary pressure to spray right. They are built for lasting service. See page 116.

Spray Pumps and Sprayers—Continued

PORTLAND SEED CO.'S BUCKET PUMP

This little pump is very convenient for all sorts of small work. Has brass cylinder and valves, two nozzles, for fine or coarse work, and an extra solid stream cap. Weight 6 lbs. Price \$5.00



LEVER HANDLE BUCKET PUMP

The lever handle and large air chamber make this the most powerful bucket pump and the easiest one to operate. All working parts are solid brass with brass ball valves and patent agitator. Fitted with graduating nozzle to throw a fine or coarse spray or a solid stream. Weight 8 lbs. Price \$7.35



STANDARD SPRAY PUMP

A powerful direct-action force pump, made entirely of brass—no packing to decay, no iron to rust. Can be used with a bucket tank or knapsack.

Equipped with combination nozzles producing a fine mist—a wide spray 15 to 20 feet, or a solid stream 50 to 60 feet.

Price, pump only, with 3 nozzles.....\$6.00

ASPINWALL SPRAYER

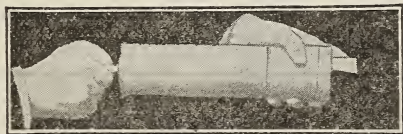


Fig. 30. One of the most convenient and economical sprayers for liquid lice-killers, sprays, etc. Weight $1\frac{1}{4}$ lbs. Price 50c

ACME SPECIAL GLASS JAR SPRAYER

Jacket and Air chamber made of heavy tin plate—Plunger rod copper Bessemer—Zinc Cap—Double tubes giving large dense spray—Tank Standard Quart Mason Jar. Price 75c

FEENY DUST GUN



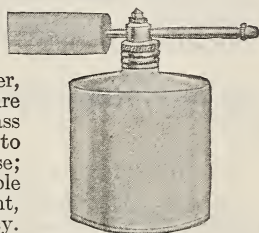
The dust cloud from a MODEL B DUSTER COVERS EVERY SURFACE of the THING THAT IS TO BE DUSTED—TOP, sides underside and ALL—HUNTS EVERY CRACK AND CREVICE—nothing escapes being treated—IT DOES THE JOB COMPLETELY. Price \$1.00

FRUIT TREES DEMAND BEES FOR PROPER POLLINATION

P. S. CO.'S. CONTINUOUS HAND SPRAYER

This is the best hand sprayer to date; has a compressed air chamber, which makes pressure continuous, has brass nozzle, adjustable to spray, fine or coarse; brass ball valve; simple in construction; light, durable; works easy. weight $1\frac{1}{2}$ lbs.

Price, tin 95c; galvanized \$1.10; brass tank \$1.35.



INSECT POWDER GUN

No need to waste any powder if you use this small hand powder blower to apply powder of any kind on poultry, dogs or cats.

Price, each, small 15c; large 30c, postpaid

PLUVIUS LAWN SPRINKLER



Pluvius

Properly constructed, iron stand, upper part all brass. Turns with small force. Weight $3\frac{1}{2}$ lbs. Each \$2.00

BUSY

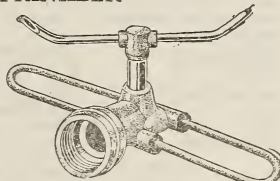
A regular water firter, runs easy. Weight 2 lbs. Price \$1.25



Busy

THOMPSON "JUNIOR" REVOLVING SPRINKLER

An unusually efficient little revolving sprinkler. With 50 pounds pressure will cover a circle about 30 feet in diameter. The Sprinkler Head is mounted directly upon a zinc base with wire-extensions. Price, \$1.00





Nozzles, Connections and Hose Supplies

NON CLOG—Best hop nozzle; throws a perfect spray; of greater capacity and a great improvement over other nozzles; produces a fog in great volume at a light pressure. Weight 8 oz. Price 75c

Non Clog Angle, price.....85c

VERMOREL NOZZLE — With degorger, affords a conical discharge. Very popular. Weight 4 ozs. Price \$1.00

SENECA—Gives a very wide spray; discharge easily graduated. Use this nozzle for white-washing. Weight 5 ozs. Price \$1.25

NOZZLE ELL. Weight 2 ozs. Price 25c

HOSE CONNECTION—For nozzle or extension. Weight $\frac{1}{4}$ lb. Price 35c

HOSE REDUCER—For nozzle or extension. Weight 3 ozs. Price 45c

DOUBLE CUT-OFF—Weight 2 lbs. Price \$2.50

BRASS Y, $\frac{1}{4}$ -inch, for nozzle only. Weight $\frac{1}{4}$ lb. Price 50c

BRASS YERDON'S BANDS, $\frac{1}{2}$ -inch.

Each 10c; doz. 75c; postpaid 85c

CALDWELL BANDS.

Doz. postpaid, $\frac{1}{2}$ -inch or $\frac{3}{4}$ -inch 35c

BAMBOO EXTENSION—Has iron pipe inside of bamboo, threaded for nozzles and stopcock. Price:

Bamboo	Bamboo
2 to 4 ft. \$1.15	10 ft. \$2.00
6 ft. 1.45	12 ft. 2.25
8 ft. 1.75	

With Stopcock, add \$1.00

STOPCOCK. Weight $\frac{1}{2}$ lb. Price \$1.00

SPRAY HOSE COUPLINGS. $2\frac{1}{2}$ -inch shank for heavy pressure spraying. For $\frac{1}{2}$ or $\frac{3}{8}$ -in. hose, price, pair 75c postpaid

HOSE COUPLINGS, for garden hose, $\frac{1}{2}$ -inch or $\frac{3}{4}$ -inch, complete. Price per pair 40c, postpaid, 45c.

HOSE WASHERS. $\frac{1}{2}$ -inch, rubber. Doz. 10c

FOR SPRAY PUMPS AND GARDENS

NOTE—All our hose, excepting spray, is furnished in 50-foot lengths, and comes coupled ready for use. We will cut any of these hose in 25-foot lengths at an additional cost of 35 cents for couplings. We will cut $\frac{1}{2}$ -inch Pomona and Monarch Spray Hose in any length desired, at an extra cost of 75 cents for spray couplings in less than 50-foot lengths.

MONARCH SPRAY HOSE—Absolutely the best hose we can buy; the rubber is of exceptionally good quality and is very heavy; and we do not hesitate to recommend it to orchardmen, who must have a very high-grade and strong spray hose. $\frac{1}{2}$ inch per foot 27c

AJAX—A splendid molded hose, will stand high pressure. $\frac{3}{8}$ inch only. Per ft. 23c

SPECIAL—A good hose for hand power pumps. $\frac{1}{2}$ inch. Per ft. 17 $\frac{1}{2}$ c

SUCTION HOSE—This is an excellent grade of suction hose, and is what we furnish with our regular pump outfit.

Per ft. $\frac{3}{4}$ in. 40c, 1-in. 60c, 1 $\frac{1}{4}$ -in. 70c

CORRUGATED GARDEN HOSE—A new process, corrugated rubber hose, that will not kink or break. Especially recommended for florists and gardeners who use hose continuously. Price per ft., $\frac{1}{2}$ -in. 18c, $\frac{3}{4}$ in. 20c

ST. HELEN'S GARDEN HOSE—Where a hose of medium price is wanted it will give excellent satisfaction. Price $\frac{1}{2}$ -in. per ft. 12 $\frac{1}{2}$ c

COTTON GARDEN HOSE—5 ply.

Price per ft. $\frac{1}{2}$ -in. 18c, $\frac{3}{4}$ in. 20c

SPRAY CALENDAR—WHEN TO SPRAY, WHAT TO USE

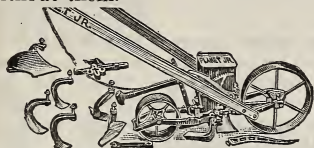
Insect or Disease	Plant Attacked	What to Spray With	First Spraying
Codling Moth.....	Apple, Pear.....	Arsenate of Lead.....	Just before calyx cups close.
San Jose Scale.....		Scalecide, Standard Sulphur Lime Solution.....	When leaves are off the trees.
Oyster Shell Bark Louse..	Apple, mainly.....	Standard Sulphur-Lime Solution..	When leaves are off the trees.
Peach Moth or Twig Borer..	Peach.....	Scalecide, 1 part to 20 parts water.	When the insects appear.
Woolly Aphis.....	Apple.....	Scalecide, 1 part to 40 parts water.	When the insects appear.
Aphis.....	Roses and plants.....	Aphisicide, Nicotinic.....	Just as soon as the insects appear.
Cabbage Worm.....	Cabbage.....	Bug Death (non-poisonous).....	Before the worms eat into the cabbage.
Cabbage Aphis.....	Cabbage.....	Scalecide, 1 part to 40 parts water.	When the insects appear.
Slug.....	Pear, Cherry, Peas.....	Slug Shot or Bug Death.....	
Thrips.....	Roses.....	Thrip Juice, or Aphisicide.....	When the insects appear.
Cottony Scale.....	Pear, Currant.....	Scalecide, 1 part to 40 parts water.	When the insects become cottony (May).
Scab.....	Apple, Pear.....	Bordeaux.....	Just before blossoms open.
Blackspot Canker.....	Apple.....	Bordeaux, double strength.....	Immediately after leaves fall.
Leaf Curl.....	Peach.....	Standard Sulphur-Lime Solution..	Before buds burst.
Mildew.....	Gooseberry.....	Potassium Sulphide, 1 oz. to 2 gallons water.....	Just as buds burst.



Planet Jr. Garden Tools



Why worry along with slow out-of-date implements and meager results? Planet Jr. tools are far more economical—they do three to six times the work, get bigger crops, and outlast several ordinary implements. **Fully guaranteed.** You are actually losing money whenever you cultivate without them.



Wgt. 50 lbs.

Holds 2 qts.

Price \$18.75

NO. 4 PLANET JR. COMBINED HILL AND DRILL SEEDER, WHEEL HOE, CULTIVATOR AND PLOW

Soon pays for itself in the family garden as well as in the larger acreage. Sows all garden seeds (in drills or in hills), plows, opens furrows and covers them, hoes and cultivates quickly and easily. **No. 4D—Seeder only Price \$15.00**



Wgt.

60 lbs.

Price

\$23.00

NO. 25 PLANET JR. HILL AND DRILL SEEDER, DBL. AND SGL. WHEEL HOE

A splendid combination for the family garden, onion grower, or large gardener. It is a perfect seeder, and combined dbl. and sgl. wheel hoe.



Wgt.

32 lbs.

Holds

1 qt.

Price

\$13.00

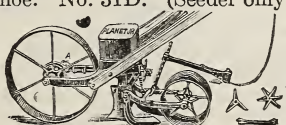
NO. 31 PLANET JR. NEW COMBINED DRILL SEEDER AND WHEEL HOE

It will sow even a small packet of garden seed with great precision. Quickly changed to a splendid wheel hoe. **No. 31D. (Seeder only).**

Wgt. 43 lbs.

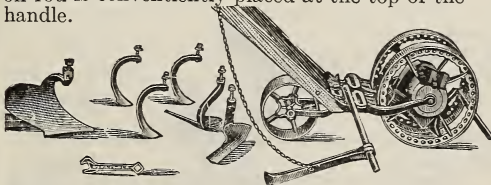
Holds 3 qts.

Price. \$18.00



NO. 3 PL. JR. HILL & DRILL SEEDER

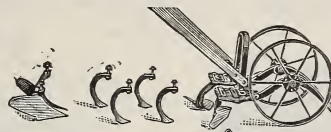
A favorite among onion growers, market gardeners and seedsmen. The index and seed cut off rod is conveniently placed at the top of the handle.



NO. 1 PL. JR. WHEEL HOE, CULTIVATOR

Wgt. 47 lbs. Holds 3 pts. Price.....\$15.75

The older Planet Jr. No. 1 Seeders have given complete satisfaction over 30 years, are used the world over, and except our hill and drill seeders are the most perfect known.



Wgt. 33 lbs.

Price

\$12.00

NO. 12 PLANET JR. DOUBLE WHEEL HOE, CULTIVATOR AND PLOW

A single and double wheel hoe in one. Straddles crops till 20 inches high, then works between. Has steel frames and 14-inch steel wheels. The greatest hand-cultivating tool in the world.



Wgt.

39 lbs.

Price

\$15.25

NO. 11 DOUBLE WHEEL HOE, CULTIVATOR, PLOW, RAKE

These Double Wheel Hoes are the highest type of machines of this kind made. Light and durable—can be used by man, woman or boy. **No. 13 DOUBLE AND SINGLE WHEEL HOE Price \$9.00. Weight, 28 lbs.**

This tool is the No. 12, with 6-inch hoes only, these being the tools that are most used.



Wgt.

26 lbs.

Price

\$9.75

NO. 16 PLANET JR. SINGLE WHEEL HOE, CULTIVATOR, RAKE AND PLOW

Single Wheel Hoes are lighter than double and do almost the same variety of work. Used mostly between the rows, yet by mounting the wheel on other side of the arm, they can be used to hoe both sides at once while the plants are small.



Wgt. 24 lbs.

Price. \$8.00

NO. 17 PLANET JR. SINGLE WHEEL HOE

This combination has a most useful set of attachments and there is scarcely any garden cultivation it will not do. **Price \$8.00**

NO. 17½ PLANET JR. SINGLE WHEEL HOE—Same type as No. 17

One pair of 6-inch hoes and three cultivator teeth. **Price \$7.75**

NO. 18 SINGLE WHEEL HOE

Same type as No. 17. This tool has one pair of 6-inch hoes only—the tools that are most constantly useful. **Price \$6.00**

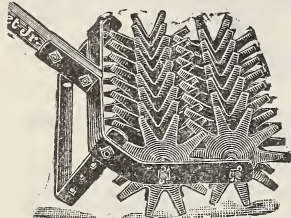


Planet Jr. Garden Tools



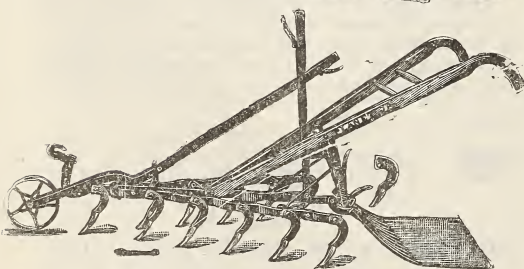
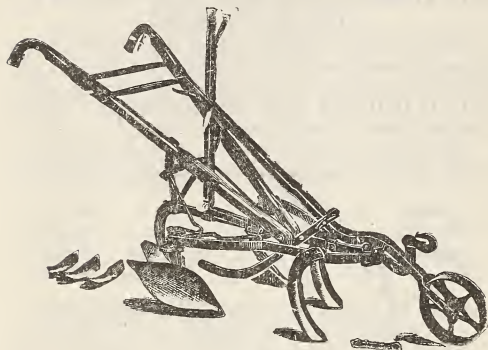
The name Planet Jr. has become synonymous with labor saving among farmers and gardeners everywhere and they instinctively want the implements that bear the Planet Jr. trade mark.

Fifty years of study and experiment have resulted in the perfection of a complete set of cultivating tools which combine in the highest degree effective work, ease of handling and wear resisting quality.



NO. 20 PLANET JR. FERTILIZER, PEA AND BEAN SEEDER

It will sow fertilizers evenly from 100 lbs. to 1000 lbs. to the acre. With material in any reasonable condition it will not clog; is galvanized, has no cogs, gears or stirring devices, and will give splendid satisfaction. Price \$36.00



Plow for
Single
Wheel Hoe
Price \$1.35
Each



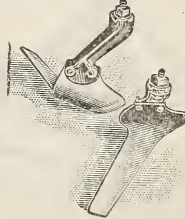
Cultivator Teeth
All Steel
Price each 40c



Plows for
Double
Wheel Hoe
Price \$1.50
Pair.



Three-Prong
Cultivator
Teeth
\$2.10 Pair



Planet Jr. Grass Edgers runs on the walk or grass equally good on curved or straight work. Weight 26 lbs.

Our Special at \$5.00

\$100 & \$101
Hoes

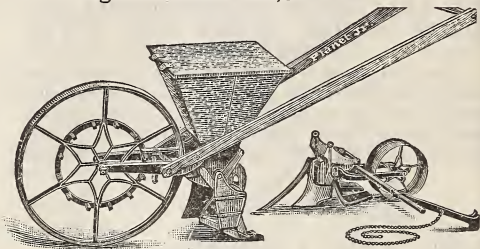
Made in two
sizes.

Price per
pair.

4 1/2" \$1.15
6" 1.25

Planet Jr. Star Pulverizer, Leveler and Weeder

This tool is especially adapted for preparing the seed bed, and will be found of great value in smoothing and fining the soil surface. The rear blade is 13 1/2 inches wide. After the crops are started, it may be used between rows as a weeder or as a crust breaker. Weight 10 lbs. Price, \$6.75



No. 20D Planet Jr., Fertilizer distributor only. Price \$31.00

NO. 8 PLANET JR. HORSE HOE AND CULTIVATOR

In general use throughout the civilized world. Is strongly built to withstand incredible strain, yet it is light and easy to handle. It opens and closes furrows, hoes right up to the plants without danger of injuring, throws dirt to or from the row and throws back from center again. With Steel Wheel. Weight packed 83 lbs. Our Special at \$19.00.

NO. 90B PLANET JR. 12 TOOTH HARROW, CULTIVATOR

Works deep or shallow, coming up close to row without injuring plants, cuts out all the weeds, stirs and mellowes the soil. Width; adjustable, 12 to 32 inches. A special favorite with strawberry growers, market gardeners and truckers. Price \$16.00



Planet Jr. Garden Tools



Cultivating Attachments for Planet Jr. Tools



Disc Hoes
Price \$3.25 pair
Have extra high shields to prevent dirt from falling back on plants.



Double Mouldboard Plow
Fits Sgl. Hoe
Price \$2.25



Rakes
Excellent for fine cultivation.



Peat Land Hoes
6 inch Only \$2.50 pair



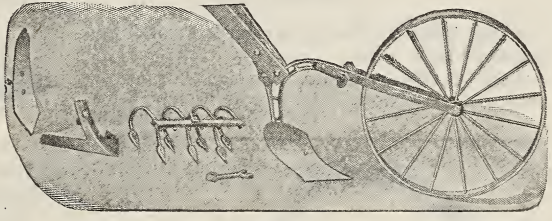
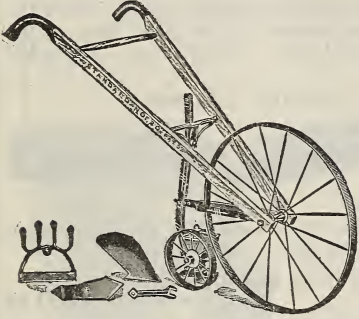
C & D Hoes
2 Sizes. Price per pair
7 inch.....\$1.50
8 inch.....1.65

3-tooth, per pair... \$1.15
5-tooth, per pair... 1.70
7-tooth, per pair... 2.10

STANDARD No. 20 GARDEN PLOW AND CULTIVATOR

No. 7 GARDEN PLOW AND CULTIVATOR

Five Tools: Plow, Rake, Weeder and Double Diamond Point Markers. Has 24-inch Wheel.

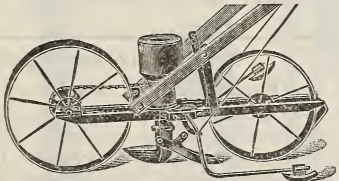


No. 7. This has an 18-inch wheel and handles adjustable to proper working height. The special adjustment for depth gives easy control. **Weight complete 18 pounds.** Price \$5.75

No. 6. The Swing Frame and extended curved handles insure easy running and a steady draft. The tools are sharpened and polished and will scour in use. 24-inch wheel. Similar to Standard No. 20. **Weight packed 24 pounds.** Price \$5.00

Not equaled by any other Cultivator. 24-inch wheel, without seeder. Price \$5.25
The above cut shows the Standard No. 20 with the Midget Drill Seeder attached. This seeder can be attached to other makes of cultivators of this style.
Midget Seeder only \$4.25.
Seeder and Cultivator \$9.25.

IRON KING SEED DRILL



For Onion Growers

A well-made, durable and easy running machine, accurate and reliable, and with careful use will last a lifetime. It will save the price of the machine in sowing a few acres. If you are growing onions you cannot afford to be without one. Also especially good for lettuce, spinach, beet, cabbage and will sow anything from turnips to peas. **Weight packed 45 lbs. Price \$15.00.**

STANDARD GARDEN TOOLS

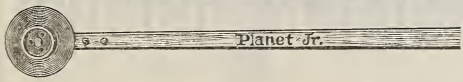
No. 14 Single Wheel Hill and Drill Seeder. A complete hill and drill seeder that can be changed from one to the other instantly, **Special price, \$12.95.**

No. 13 Single and Double Wheel Cultivator—3 cultivator teeth, 2 hoes and 2 plows. **Special price, \$10.75.**

No. 22 Single Wheel Cultivator—3 cultivator teeth, 2 hoes and 1 plow. **Special price, \$7.75.**

PLANET JR. GRASS EDGER

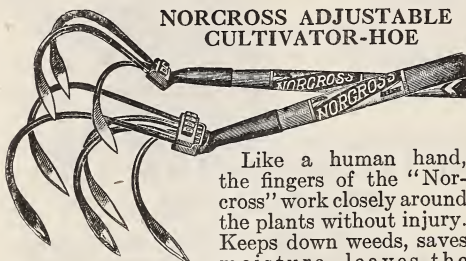
With the No. 2 Planet Jr. Edger you can edge either straight or curved walks of cement, stone or brick, rapidly and easily. **Price \$1.75**



Garden Tools, Implements, Etc.—Continued



Hall's Dandelion Puller



NORCROSS ADJUSTABLE CULTIVATOR-HOE

Like a human hand, the fingers of the "Norcross" work closely around the plants without injury. Keeps down weeds, saves moisture, leaves the ground level.

FIVE PRONG for regular garden work; 4-ft handle, weight 4 lbs. Price \$1.25

THREE PRONG lighter in weight, for narrow rows and close work, 4-ft. handle, weight 3 lbs. Price \$1.00

HAND WEEDERS

Magic Weeders—Made of best quality hard steel wire, an ideal tool for fining the surface soil. We offer three sizes, illustrated above:

- | | |
|--|-----------|
| Magic No. A, 3 tines, short handle, weight 1 lb. | Price 25c |
| Fig. 21. Lang's. Weight 1 lb. | Price 25c |
| Fig. 23. Hazeltine's. Weight 1 lb. | Price 35c |
| Fig. 24. Excelsior. Weight 1 lb. | Price 25c |
| Fig. 25. Noyes'. Weight 1 lb. | Price 30c |

Hall's Dandelion Puller (*see cut*)—Pulls the root without tearing up the lawn; long handle; polished steel blade. Weight 2 lbs. Price 60c

GARDEN TROWELS



Maynard

Don't class these tools with the cheap stock offered by the department stores.

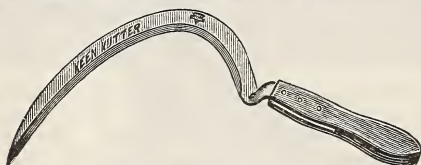
Maynard Steel Shank—Extra heavy.

No. 85—New style long handle. Weight 1 lb. Price 50c

No. 217—Six inch; steel transplanting trowel. Weight 1 lb. Price 30c

No. 217A—Transplanting hoe trowel, used by gardeners in setting out plants. Weight 1 lb. Price 50c

No. 216—Ladies' flower trowel. Weight 1 lb. Price 15c



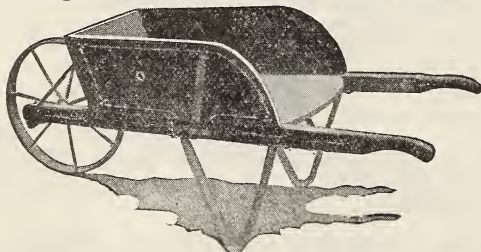
GRASS HOOKS or SICKLES

These are the latest style and shape.

Village Blacksmith—Hand forged, weight 1 lb. Price 75c

GRASS SHEARS

Village Blacksmith—No. V51. 1 lb. \$1.25



AMERICAN GARDEN WHEEL-BARROW

20-inch steel wheel with 2-inch oval tire. Solid steel axle and malleable axle boxes. Oval pressed steel legs. Vermilion finish and varnished. Light but rigid—built to last. Shipped K. D. No. 1—Size of deck 17 x 22 x 29.

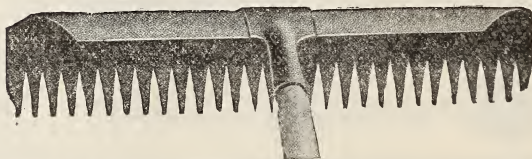
Price \$7.50

ALL-PURPOSE RAKE

For Dandelion, Garden or Lawn

The All-Purpose Rake is unequalled for removing yellow dandelions. When it is pulled across the lawn, the stems, leaves and blossoms are wedged between its teeth and easily pulled out. It is also a first class rake for general work. It will pick up the acorns, pebbles, small twigs, etc., which an ordinary rake will not touch, and will clean the lawn of cut grass and dead leaves in better shape than is possible by any other means. It is self cleaning. A single backward stroke cleans the rake.

Price \$1.00





The Clipper Grain and Seed Cleaner

Used by all Agricultural Colleges and by the U. S. Department of Agriculture

No work done on the farm brings such large returns as thoroughly preparing the grain and seed by recleaning and grading for planting. This insures an even stand of strong, healthy plants, and a larger yield of a higher grade. The "Clipper" cleaner is especially adapted to this kind of work on account of its ability to separate the small, also the light, dead seed or grain from the perfect seed or grain.

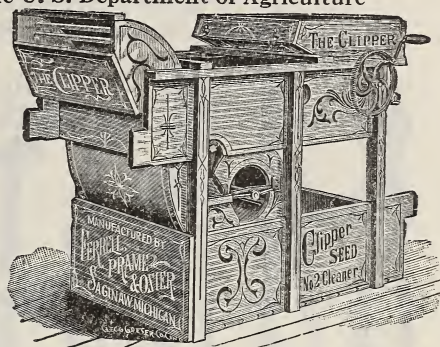
Other mills depend entirely upon screens for this work, and with unsatisfactory results. The "Clipper" screens all straw and foreign matter from the grain before it enters the air shaft, and the "Vertical Blast" does the rest.

Screens are so arranged as to be in plain view and of easy access to the operator while machine is in operation, and a set of ten being furnished with either the No. 1B or No. 2B. These are ample for general work—but special screens can be furnished for any cleaning operation.

The "Clipper" is a first-class, inexpensive and durable mill for general use.

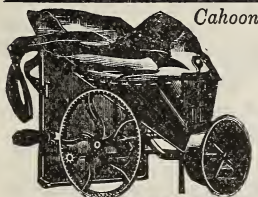
Prices: No. 1B—Capacity 40 bu. wheat or 12 bu. of clover per hour. Weight packed, 200 lbs. \$42.50

No. 2B—Capacity 20 bu. clover seed per hour. Weight, packed 250 lbs. 50.00



Guaranteed to do the most perfect work of any Hand Seed Cleaner manufactured

We have supplied "Clipper Cleaners" to the mills, dealers and prominent growers of the Northwest. If you grow grain or seed and do not own a "Clipper," you are losing many times its cost every year. Let us send you "The Clipper" Catalog of hand and power cleaners. All sizes and prices. A "Clipper" will improve the quality and increase the yield of grain.



CAHOON

Broadcast Seed Sowers

CAHOON—The standard broadcast seed sower of the world, made of steel, iron and brass and with ordinary care will last a lifetime. This is the most popular and best built seed sower; has a force feed and does excellent work. Instructions with each machine. Weight 9 lbs.

Price \$5.00

TIN HORN SEEDER—Adjustable. A good serviceable seeder at a very low price. Weight 1 pound.

Each \$1.00



Fig. 14 Fig. 16 Fig. 20 Fig. 22

CORN PLANTERS

ACME AUTOMATIC—One Hand (Fig. 20)—Puts the right number of kernels just where you want them and at the proper depth, requiring only one hand, either right or left. Weight, packed, 6 lbs.

Price \$3.00

ACME—(Fig. 22)—A two-handed planter. Light, well made, and especially adapted to heavy, cloddy or stony soils. Adjustable—from popcorn to large kidney beans. Weight, packed, 4 lbs.

Price \$1.50

MASTER'S PLANT SETTER

With a "Masters" you can set, water and fertilize 10,000 plants a day and do better work than if set by hand. Works as fast as you walk. Sets cabbage, kale, celery, tomatoes and vegetables plants of all kinds. Weight, packed, 5 lbs.

Price \$6.00

POTATO PLANTERS

PEERLESS—Tubular (Fig. 16)

—This light tubular planter locks itself as it is lifted out of the ground and the next potato may be dropped in at once. Opens automatically by forward movement. Weight, pld. 5 lbs.

Price \$2.35

PINGREE or ACME—(Fig. 14)

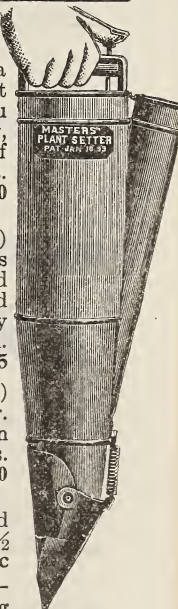
—Similar in action to the tubular. You lift the planter up to drop in the potato. Weight, packed, 4 lbs.

Price \$1.60

CORN KNIVES

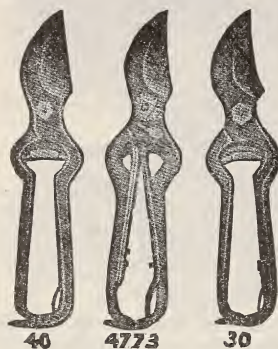
NIAGARA—Broad tapered blade. Length including handle 22½ in., weight, packed, 2 lbs. Price 85c

VILLAGE BLACKSMITH—Straight blade 22½ in., including handle. Wt., pld., 2 lbs. Price \$1.00



PRUNING TOOLS, ETC.

NOTE—Compare Numbers on Cut to Those in Descriptions



NEW BASTIAN PRUNER
Makes a Clean, Sharp Cut

The powerful lever of the new Bastian Pruner enables you to do the same work in half the time and with half the labor that would be required with old-style Pruners.

Blades are of finished Damascus steel, very strong, and hold their cutting edge. Simple in construction, light, strong and durable. We recommend the Bastian to all fruit growers.

Prices F. O. B. Portland

6 ft. . . \$1.75	12 ft. . . \$2.50
8 ft. . . 2.00	14 ft. . . 2.75
10 ft. . . 2.25	16 ft. . . 3.00

PRUNING SHEARS



Bastian

No. 4773—9-inch; full polish, with double brass springs; best American make. Weight 1 lb. Price \$2.35

No. 40—9-inch; bright finished, polished blade spiral steel spring; made for hard service. Weight 1 lb. Price \$1.75

No. 41—Same as No. 40, except with ratchet nut. Weight 1 lb. Price \$1.90

No. 30—7-inch, black finish; polished blade; very good. Weight 1 lb. Price \$1.25

No. 31—Same as No. 30, only 9-inch ratchet nut; an American make. Wt. 1 lb. Price \$1.40

No. 50—Five and a half-inch; nickel-plated; small, but of best material; fine for ladies. Weight 1 lb. Price \$1.25

Levins Shear No. 23 Price 1.00

Grape or fruit thinning. Price .65

BUDDING KNIVES

Prices Postpaid

No. 13—Plain wood handle, stationary blade. Price 50c

GRAFTING KNIVES

No. 6—Plain wood handle, stationary blade. Price 60c

PRUNING KNIVES

No. 2—Plain wood handle, stationary blade. Price 70c

No. 4—Polished wood handle. Price 90c

BRANCH SHEARS

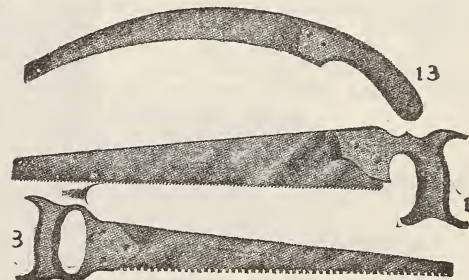
No. 126—26-inch. Weight 5 lbs. Price \$2.45

Fig. 35—Standard pattern. Satisfactory for light work; a good value.

24 inch handle, weight 2½ lbs. \$1.60

Your Roses and Trees should be properly pruned and you should have good tools to use.

PRUNING SAWS



No. 13—California Pruner (Crescent). Finest silver steel. 14-inch. Each \$1.25

No. 1—Pruning Saw. Made of genuine silver steel. 16-inch, each \$1.35; 18-inch, Each \$1.50

No. 3—Duplex Pruner. 16-inch, Each 1.50
18-inch, each \$1.75.

GRAFTING WAX

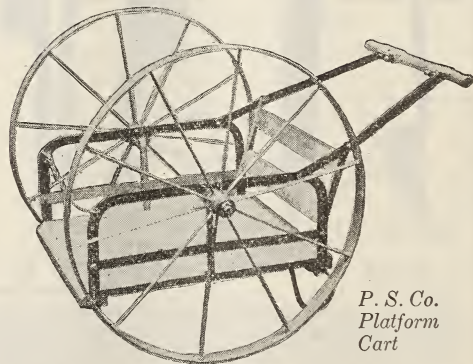
LION BRAND—¼ lb. 20c; ½ lb. 30c; 1 lb. 60c

Add postage at zone rate.

NORTHWEST FRUIT PICKING LADDER

6, 8, 10 and 12 ft. lengths. Strong, light and serviceable. Price 50c per foot

HANDY CARTS



*P. S. Co.
Platform
Cart*

All metal parts malleable steel, strong, light, easy to wheel.

Platform 27x30 inches; 36-inch wheel; 2½-inch tire. Wgt., K. D., 85 lbs. Price \$13.75



MISCELLANEOUS FLORISTS' SUPPLIES

FOR FLORISTS AND NURSERYMEN

PLANT STAKES—Round cedar, painted green, 3 ft. \$1.00 doz.—3½ ft. \$1.25—4 ft. \$1.60—5 ft. \$2.00—6 ft. \$3.00.

VITAPLASTIC—(Glazing Compound)—The best, most dependable glazing material. Never hardens or cracks. Write for circular. Price, gal. \$2.50; 5 gals. \$11.25; 20 gals. \$45.00.

VITAPLASTIC MACHINE— \$7.50

WOODEN POT LABELS

4 inch. Plain, per 100 25c; 1,000 \$1.20

Painted, per 1,000, wt. pkd. 4 lbs., 1.75

5 inch. Plain, per 100 30c; 1,000 1.65

Painted, per 1,000, wt. pkd. 6 lbs., 2.15

6 inch. Plain, per 100, 35c; 1,000 2.10

Painted, per 1,000, wt. pkd. 9 lbs., 2.30

WIRED TOOTH PICKS—2½ inches long.

WIRED MATCH STICKS—4 inches long.

WIRED MATCH STICKS—6 inches long.

NICO FUME LIQUID—The best fumigant and spray for greenhouse work. Kills aphid, red spider, mealy bug, thrip, etc. Write for prices.

TREE LABELS

Painted copper wire, per 100 40c; 1,000 \$2.40.

Unpainted copper wire, wt. pkd. 4 lbs. per 1,000. Per 100, 35c; 1,000 \$2.00

PENCILS—Weather-proof for marking. Each 15c

WIRE HANGING BASKETS—10 in. 25c—12 in. 30c—14 in. 40c. Special Quantity prices.

HALL'S NICOTINE FUMIGATOR

A simple and effective preparation for fumigating greenhouses for plant lice and thrips.


A real smudge or punk ready and easy to use.

Full directions with each package. 1 lb. can \$1.25, 2½ lb. \$2.50, 10 lb. \$8.50.

GLAZING POINTS—(Peerless)—Best point made. 1,000 in box. Weight 2 lbs. Price 75c.

Our line of Chiffons, Ribbons, Cords, Wire Designs, Foil, Baskets and general Florist Supplies stock is very complete.

RAFFIA

 In ordering Raffia by mail, be sure to add postage on 1 lb. or more.

RAFFIA—Natural color. Price, ¼ lb. 15c—postpaid, 20c; not postpaid, per lb. 30c.

COLORED RAFFIA—Any shade, the popular colors being red, yellow, orange, black, blue and purple. Per pkg. postp'd 25c, per lb. \$1.50

Headquarters for MAGNOLIA LEAVES.

Write for prices. We can save you money.

CYCAS LEAVES—Sizes 8x12, 12x16, 16x20, 20x24.

WIRE—Cut and uncut. Sizes 18, 20, 22, 24. Cut in 12-lb. boxes, and uncut in 12-lb. coils.

WIRE DESIGNS—For Florists, Achors, Bases, Broken Columns, Broken Wheel, Crescent Crescent Wreaths, Crosses, Odd-Fellows' Pillows, Shower Wreaths, Shields, Stars, Triangles, Wreaths flat. Tell us what you want and we will supply it. Write us regarding your needs.

All Prices on this page F. O. B. Portland.

Write us for your requirements in the FLORIST Line.



BULL DOG CLIPS—If once used, always used.


Price, \$1.00 per box of 1,000

CUT FLOWER BOXES

We can supply Cut Flower Boxes, in the following sizes. Florists write for prices

3 x18x5	3½x30x5	5x36x8	8x16x16
3 x21x5	4 x24x8	6x40x10	8x20x20
3½x24x5	5 x28x8	6x36x14	8x24x24

FLOWER POTTS

 Florists, nurserymen and growers should send list of requirements for Special Prices

BULBS IN SEASON

FLORISTS and GROWERS. We have direct connections with the best growers in Holland and Japan, and import in car lots and make special prices where orders are placed in advance, and it will be to your advantage to take this up with us before placing your order.

Orders should be given in May or early June to insure early delivery.

Porch Boxes, Japanese Tubs, Hanging Baskets, Lawn Vases, Potted Plants

Specimen Ferns, Palms and Ornamental Plants furnished to order. We can assist you in securing special decorative effects for House or Garden.

Tell Us Your Plans—WE CAN SAVE YOU MONEY

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG

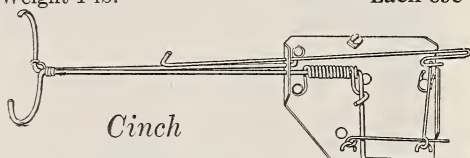


"WOOD-LARK"
TRADE MARK
**SQUIRREL
AND GOPHER
POISON**
QUICK, CERTAIN,
→ DEADLY. ←

Exterminates Squirrels,
Sage Rats, Field Mice,
Pocket Gophers, Prairie
Dogs, Crows. Use early
when green food is scarce.
Price 1 lb. package 50c

(Cannot be mailed).

CINCH GOPHER TRAP—Fits the hole, a
sure killer and the most satisfactory trap.
Weight 1 lb. Each 85c



Cinch

GOPHER TRAP—Easy Set—Never fails.
Weight 1 lb. Price, each, 25c

THE OFFICIAL RAT TRAP

The Government selected this trap from
among thousands of models submitted. Spring
releases with either upward or downward pressure—Rats Nibble Upward. The "Official"
always gets them.

Official Rat Trap, weight 1 lb. Each 20c
Official Mouse Trap, weight 4 oz. Each 5c



REDDICK MOLE TRAP
No Mole Can Pass Under It
and Live

These traps are strong and durable and worth the price to anyone
troubled by moles.

Full directions with
each trap.
(See Cut)
Weight 3 lbs.
Price \$1.25

**Reddick
Mole Trap**



**OUT O'SIGHT
MOLE TRAP**—
One of the best.
Sure to "get them."
Weight 2 lbs.
Price \$1.25

CERTAIN TEED (Extra Quality)

Certain-teed Roofing is by every test the best
roofing on the market today. We make it the
best we know how, and we specially guarantee
it for 5, 10, and 15 years, according to weight.
Everyone knows this brand of goods.

No. 1—Light..... Price \$2.00
No. 2—Medium..... Price 2.55
No. 3—Heavy..... Price 3.05

MAJOR (Standard Quality)

A standard
quality roofing.
Excepting Certain-teed it will
compare favorably with any
roofing on the market. We
guarantee it for
4, 8 and 12 years,
according to weight.

No. 1—Light... Price \$1.55
No. 2—Medium Price \$2.10
No. 3—Heavy. Price \$2.65

Certain-teed



LAWN MOWERS

HIGHEST GRADE. FULLY GUARANTEED

ECLIPSE—Self Sharpening—This is one of the best built, most durable and satisfactory
Lawn Mowers. The thumb-screws for bringing the revolving and stationary blades into position
are easily adjusted—as is also the arrangement for sharpening all blades to fit so they cut like shears.

14 in. cut, 10 in. wheel	\$19.00
16 in. cut, 10 in. wheel	20.00
18 in. cut, 10 in. wheel	21.00
19 in. cut, 10 in. wheel	22.00

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG

BEE SUPPLIES

IF YOU live in the suburbs, keep poultry, or live on a farm, keep a few stands of bees, they will amply repay you for the little attention they require, and will often return you a splendid profit.

IF YOU OWN AN ORCHARD then you must of necessity have bees if you would secure the largest crops of most salable fruit, for proper pollination is essential to best development. A most interesting series of experiments on the Pollination of the Apple, conducted by the Oregon Agricultural College, proves the total inadequacy of all pollenizing agents, with the single exception of Bees. The wind, which at first thought would seem dependable, is a total failure outside of the radius of a few feet, even under most favorable conditions, and very uncertain at any distance. Some few varieties are self-fertilizing, but these are vastly improved by crossing the pollen with other sorts, and the busy honey bee seems to be our sole reliance for effective work. Fortunately bees are easily obtained, are very little trouble, and an orchard and apiary make an ideal combination from a business standpoint. This subject is well worthy the careful investigation of all orchardists, and we would be pleased to hear from those interested.

WE ARE THE PIONEERS in the Bee Supply business in the Northwest, are thoroughly familiar with local conditions and requirements and if you are new to the business or the country we can be of much help in saving you any unnecessary outlay, work or loss of time and can start you on the right road to success. Stocks are large and complete and we can fill any size order on short notice and will give the small order just as careful attention as the larger one.

WESTERN PINE AND CEDAR HIVES made to our order in standard sizes and designs; of first class material and workmanship, are very popular with local beekeepers. Our Western lumber is satisfactory and lasting and we recommend them as being economical and serviceable.

The magnitude of our business and its steady growth is a guarantee of service and quality, and we look forward to the pleasure of serving you.

PORTLAND SEED COMPANY

HOW TO ORDER

WHEN TO ORDER. Don't wait until your Bees have swarmed before you order your hives or supplies. Send in your orders early and be on the safe side.

PREPAY STATIONS. When you send in orders to go by freight or express, be sure that you add money enough to pay freight charges if your station is a prepay, which is always the case where there is no regular agent.

PRICES—All prices are subject to change without notice.

BEE SUPPLIES BY MAIL. The prices named in this catalog are not prepaid unless so stated. Many of the lighter supplies can be mailed, when it is necessary, but we believe express or freight the most satisfactory way of sending.

LARGE ORDERS. Perhaps you want only a hive or two and a few supplies; it may be your neighbors are in the same fix. This is your chance to make up a club order and secure your hives or supplies cheaper.

CAUTION AGAINST SPRAYING WHEN TREES ARE IN FULL BLOOM

THE best authorities advise against spraying until blossoms are ripe and falling, as by this time pollination is complete and spraying will accomplish its purpose from this time until calyx closes.

Spraying when trees are in bloom may destroy bees and other insects necessary to pollinate and these natural agents should not be interfered with as their work of transferring the pollen insures bountiful crops and shapely fruit.

This is generally understood by the best informed orchardists and growers and in many states there are laws against spraying when fruit is in flower.

Damage to fruit is often unjustly charged to bees for they cannot pierce the skin of even the softest fruits, but where there is a scarcity of blossoms, they will often work on fruit that has been bruised, damaged by birds or cracked by the weather, but are unable to destroy sound fruit of any variety.

Sow Buckwheat for Fall Bee Pasturage

To insure plenty of winter stores for your bees, sow buckwheat any time in the late spring or early summer. It will bloom in about sixty days from planting and give an abundance of nectar much sought after by the bees. The honey is dark but makes good winter stores.

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG

Portland Seed Company's Hive Combinations

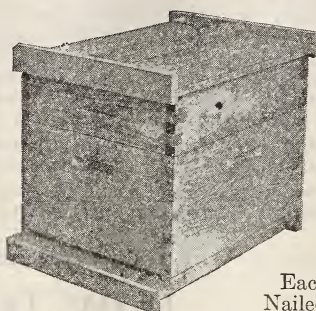
Our Western hives, either Pine or Cedar, are standard sizes and well made of select material dovetailed. When ordering note the different figures. Fig. 1 means complete with sections and foundation for starter. Fig. 2 means without sections and foundation starter. Story and a half hives are preferred by many, consisting of brood chamber, brood frames, excelsior cover, bottom board, super for sections, with section holders and separators. Single story hives are equipped with brood frames, covers and bottom boards. Supers used for sections or for extracting with half Hoffman frames or hive bodies with full depth frames require no extra cover or bottom boards. In complete or Fig. 1 hives, we send one sheet of foundation as starter for brood frames and one sheet of super foundation for starter in sections. If full sheets are wanted, these must be ordered by the pound. Hives and supers are packed and shipped in crates of 5 K. D. and no less than 5 will be shipped K. D. except at nailed price, the added cost being for breaking crates and repacking.

NOTE—Original crates of five hives are too large for Parcel Post. Nailed hives and supers are sold at increased price to cover cost of nailing and these take a higher freight rate than crates K. D. All western supers for sections take the regular size $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{7}{8}$ sections.

Portland Seed Company's Dovetailed Western Pine Hives

These hives are made especially for our trade.

	Each Nailed	5 K. D.	Wt. of 5
8 fr. Fig. 1, $1\frac{1}{2}$ story....	\$3.75	\$15.00	140
8 fr. Fig. 1 Single story No Super.....	2.50	9.50	103
8 fr. Fig. 2 with Super No Sections or starter.....	3.10	11.75	135
8 fr. Fig. 2 Single Story No Super.....	2.40	9.00	100
8 fr. Hive Body empty....	.90	3.75	35
8 fr. Hive Body and brood frames.....	1.25	5.25	
8 fr. Covers.....	.65	2.75	
8 fr. Bottom Boards.....	.59	2.00	
10 fr. Covers.....	.75	3.00	
10 fr. Bottom Boards.....	.65	2.50	



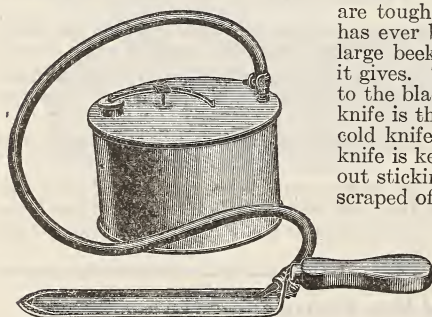
Order by
Number

P. S. Co's.
Fig. 1 for $4\frac{1}{4} \times$
 $4\frac{1}{4} \times 1\frac{7}{8}$ Sec-
tions

	Each Nailed	5 K. D.	Wt. of 5
10 fr. Fig. 1, $1\frac{1}{2}$ Story....	\$4.05	\$16.50	178
10 fr. Fig. 1 Single story no Super.....	2.70	10.25	128
10 fr. Fig. 2 with Super no Sections.....	3.35	13.00	163
10 fr. Fig. 2 Single story no Super.....	2.60	10.00	127
10 fr. Hive body empty....	1.00	4.25	
10 fr. Hive Body and brood frames.....	1.35	5.75	

We can also supply the same equipment as above, in CEDAR HIVES, at an added cost of 10 cents each, and 10 frame.

ROOT STEAM HEATED UNCAPPING KNIFE



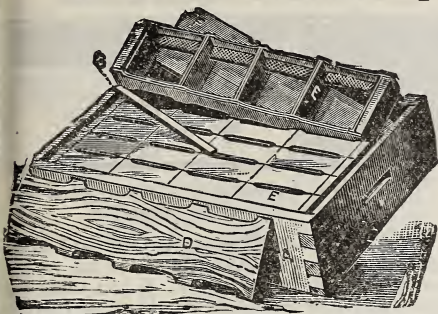
For a large amount of uncapping, especially where combs are tough or hard, this knife is undoubtedly the best tool that has ever been devised and its constantly increasing use among large beekeepers is sufficient proof of the complete satisfaction it gives. The handle is made in one piece and fastened securely to the blade by an improved method. The great feature of this knife is that it will slice off cappings much more rapidly than a cold knife or one that has to be dipped in hot water. As the knife is kept constantly hot, the cappings slide off from it without sticking, while with the cold knife the cappings have to be scraped off on the side of the can or table.

The copper boiler used with this knife is equipped with a fool-proof safety-valve which we have tested under every condition. It is adjustable, and the opening is also used as a filler hole. This boiler, in connection with a suitable oil or gasoline stove, completes the outfit. Three feet of rubber steam hose are furnished with the knife.

	Weight	Price
Root steam-heated uncapping knife, 10-inch, with 3 ft. tubing.....	2 lbs.	\$5.50
Steam boiler with safety valve for use with above.....	3 lbs.	2.75

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG

Portland Seed Company's Dovetailed Supers



Super, Designated as Fig. 1—Complete

This is one of the best Supers sold for the use of $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{8}$ sections having beeways. We use wood separators (or slat separators), beeway sections, and section holders having bottom bars scored out to correspond with the beeways in the sections.

	Each	5	5
Cedar	Nailed	K.D.	Weight
Fig. 1 8 fr. Complete.....	\$1.35	\$6.00	35 lbs.
" 2 8 fr. Less Sec. & Fdn .85	3.50	30 lbs.	
" 0 8 fr. Empty.....	.55	2.00	20 lbs.
" 1 10 fr. Complete.....	1.55	7.00	40 lbs.
" 2 10 fr. Less Sec. & Fdn .95	4.00	35 lbs.	
" 0 10 fr. Empty.....	.60	2.25	22 lbs.

Extracting supers are deeper and take the Half-Hoffman shallow extracting frames. Cedar or Western Pine.

8 fr. Extracting.....	1.30	5.25	40 lbs.
10 fr. Extracting.....	1.40	5.75	45 lbs.

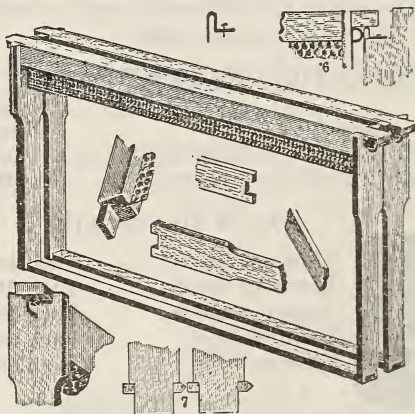
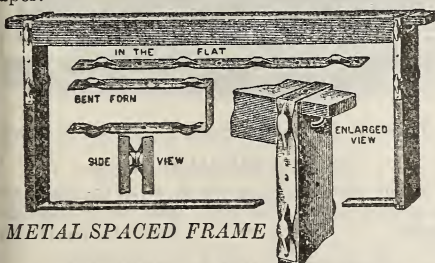
Hoffman Brood Frames

The Hoffman Improved Foundation Fastening Frames (see cut) are the latest, most satisfactory brood frames. The top bar is made with a beveled strip, which holds the foundation absolutely in place, perfectly straight and exactly in center of top bar. Any one can put foundation in these new frames very rapidly.

PRICE OF HOFFMAN FRAMES

	Wt. per 10	Per 10	Per 100
Improved F.F. Western $4\frac{1}{2}$ lbs.	\$0.75	\$6.00	
Half Hoffman Western $2\frac{1}{2}$ lbs.	.75	6.00	

The Half Hoffman Frame is used in the Ideal super.



Hoffman Frames—Showing Foundation Starter

NEW METAL SPACED FRAME

Recommended where there is much propolis. Spacing is accurate and frames handle easily. Price per 10, \$1.00—100, \$7.00. Wt. per 10, 5 lbs. Metal Spacers Only—Per 100 Wt. $1\frac{1}{2}$ lbs. \$1.00

SECTION HONEY BOXES

Our No. 1 Sections are made of the choicest white basswood lumber, and are all perfect in finish and free from defects. They are not all snow-white, but vary from that to a light cream color. Choice honey shows off to best advantage in a section not too white, as it is the honey rather than the wood that the customer looks at. Weight, $6\frac{1}{4}$ pounds per 100.

The $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{8}$, $3\frac{3}{8} \times 5 \times 1\frac{1}{8}$, and $4 \times 5 \times 1\frac{3}{8}$ plain sections, having no beeway, per 1000 \$12.50.



$4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{8}$, generally used and always sent unless otherwise ordered.

Portland Seed Co.'s No. 1 per 100 \$1.90—per 500 \$7.75—per 1000 \$15.00.

Portland Seed Co.'s No. 2 per 100 \$1.85—per 500 \$7.50—per 1000 \$14.50.



Section Holders

Six section holders with separators, one lower and springs are put in each super, and each section holder holds four one-pound honey boxes. The bottom strip is $\frac{1}{4}$ -inch thick and is cut out to fit insets of sections.

Western, $1\frac{1}{8} \times 18\frac{1}{8}$ inches, slotted. Weight 20 lbs. per 100. Each 5c—per 100 \$4.50

Blocks— $1\frac{1}{8}$ Western. Per 100 \$1.25

Bottoms only— $1\frac{1}{8}$ in. wide, slotted. Western.

Wt. 11 lbs. per 100. Each 3c—per 100 \$2.50

SEPARATORS

One separator should always be placed between each two section holders so that the bees will build the honey comb even in each section (see illustration of supers).

Western (Veneer) 8 lbs. per C; per 100 90c

HONEY SHIPPING CASES

These have a glass front, and corrugated, non-dripping packing, which protects against breakage, and are designed for marketing honey. If you expect to get the best market price, you must put your honey up in nice cases.

PRICE LIST OF SHIPPING CASES

	Nailed
	Each
24-lb. Eastern $4\frac{1}{4} \times 1\frac{1}{8}$ Sections	55c
24-lb. for $3\frac{1}{8} \times 5$ Sections—Ideal.....	40c

No. 30 TINNED WIRE

$\frac{3}{4}$ -ounce spools.....	Each 10c
$\frac{1}{4}$ -pound spools.....	Each 25c
$\frac{1}{2}$ -pound spools.....	Each 40c
1-pound spools.....	Each 60c
5-pound coils.....	Each \$2.50

Add postage if ordered mailed.

T-TINS AND RABBETS

	Per 10	Per 100
Tin Rabbits, 12-inch.....	20c	\$1.90
14-inch.....	25c	2.40
T-Tins, 13-inch.....	25c	2.35
15-inch.....	25c	2.45
Flat Tins, 13-inch.....	20c	1.40
15-inch.....	20c	1.45

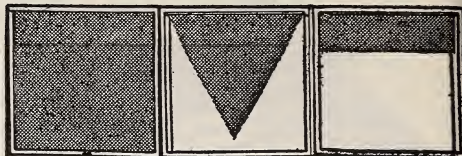
Van Deusen Hive Clamps

Very convenient for fastening bottom board to hives and various other uses. They come in pairs.

Without screws per pair 10c, 10 pairs 90c, add 3c per pair postage for single pairs.



Comb Foundation



Full Sheet, Triangular and Quarter Sheet
Method of Using Foundation

There is little question but that it pays to use foundation in full sheets in the brood frames and sections, especially the latter. If you think you cannot afford so much you should at least have a strip for a starter. It will help much more than it costs you in getting straight, even combs. You can use a starter any width from one inch up.

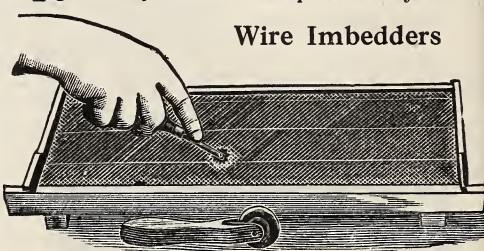
Our foundation is made by the "Weed process," and is a very superior article. Packed in 1, 2, 3, and 5-lb. cardboard boxes in a case.

PRICES OF COMB FOUNDATION

When you order, be sure to tell what grade you want, and give price.

GRADE	Size of Sheets	No. per lb.	In 1 lb.	In Lots of lbs.
Medium Brood...	$7\frac{3}{4} \times 16\frac{7}{8}$	7	\$0.70	\$6.70
Extra Light Brood	$7\frac{3}{4} \times 16\frac{7}{8}$	9	.75	7.30
Light Section....	$3\frac{1}{8} \times 15\frac{1}{2}$	28	.80	7.80
Extra Light Sect'n	$3\frac{1}{8} \times 15\frac{1}{2}$	30	.85	8.30

Write for lowest market prices on larger orders.



Wire Imbedders

This cut shows the Spur Imbedder at work.

SPUR WIRE IMBEDDER

This is like a tracing wheel, with the teeth set to firmly imbed the wire and not injure the comb.

Price by mail, 45c

ELECTRIC WIRE IMBEDDER

A practical device that imbeds the wire by heating it electrically, the wire melting its way into the center of the wax foundation, only requires two common dry cells, simple and inexpensive.

PRICE, without batteries, \$1.50

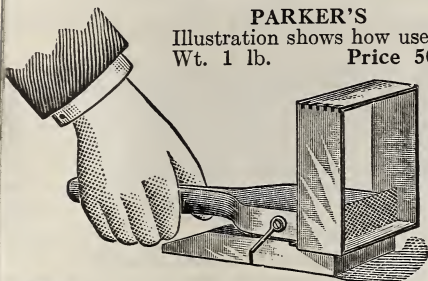
Miscellaneous Hive Parts

DIVISION BOARDS.	Wt. 5 oz. per 10.
	Each 15c—10, \$1.25
FOLLOWERS	Each 5c—10, 50c
TIGHTENING SPRINGS	12 for 15c; 100, 90c

Foundation Fasteners

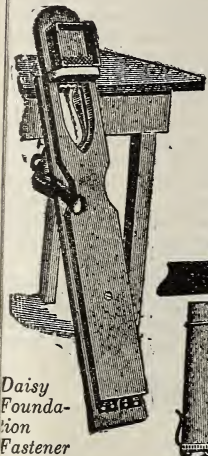
PARKER'S

Illustration shows how used.
Wt. 1 lb. Price 50c



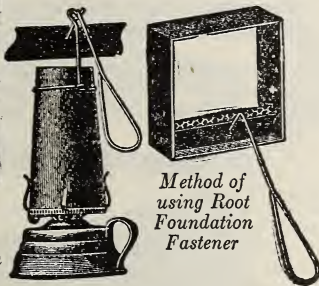
DAISY FOUNDATION FASTENER

This is one of the best for putting starters into sections. Very simple. Easily operated. With lamp, Wt. 6½ lbs., \$3.40. Owing to danger of breakage no chimney is sent with lamp.



Daisy Foundation Fastener

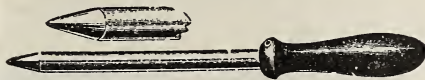
Root's Foundation Fastener



Method of using Root Foundation Fastener

ROOT'S FOUNDATION FASTENER

Complete with Lamp, weight 8 oz.
PRICE, 75c; without lamp, 35c



VAN DEUSEN WAX TUBE FASTENER

For fastening the foundation sheets to thin top-bars there is nothing better than the Van Deusen Wax-Tube. It is simply a tube half an inch in diameter, six inches long and tapering. This is filled with hot wax, and the point is then slowly drawn along the edge of the foundation in contact with the top-bar, leaving a fine stream of hot wax to cement it.

Price 40c each; by mail 45c



ROOT NICKED STEEL HIVE TOOL

Made of spring steel; will stand any strain as a pry or scraper; is the best tool made. Wt. 4 oz.
Price, each, 65c

BEE VEILS

GLOBE BEE VEIL

No trouble to put on or take off. Protection against mosquitoes, flies, bees, gnats, etc. The veil weighs only five ounces.

Price \$1.65

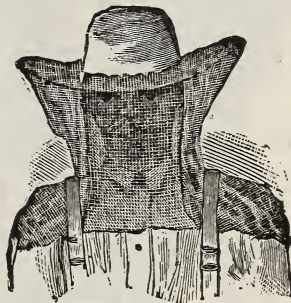
ALEXANDER

Made of fine Bronze Wire Cloth. Stands clear of the face; has muslin top and bottom. Weight 1 lb.
Price \$1.50



HAT VEILS

These veils have a rubber band around the top, so as to fit the hat snugly. The lower edge is bound to prevent fraying. The kinds of material are given below.



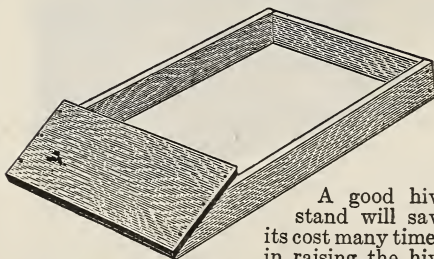
Price List (Postpaid)

- No. 1 Veil, made entirely of silk tulle. . . . \$1.60
- No. 2 Veil, cotton tulle, with silk tulle face 1.40
- No. 3 Veil, cotton tulle throughout. 1.20

BEE KEEPERS' GLOVES

CANVAS—Long Sleeve, Oiled, Ladies or Misses.
Price \$1.25—postpaid \$1.35

HIVE STANDS



A good hive stand will save its cost many times, in raising the hive up from the ground, preventing the rotting of the bottom board and saving the lives of bees. Many bees heavily loaded fall and die on the ground unless an easy runway is furnished.
All Cedar Stand 30c each K.D.

DIAMOND FERTILIZERS

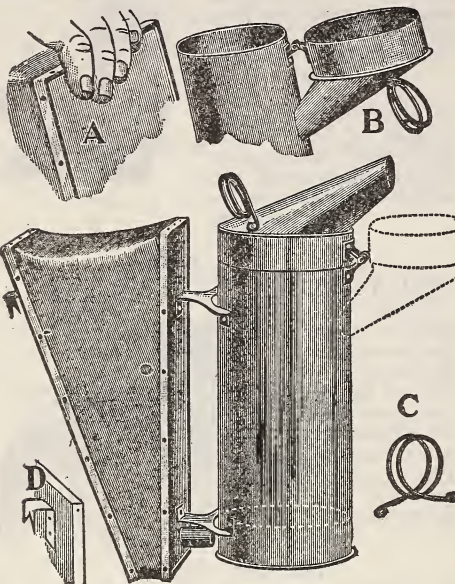
Have Helped Others to Win—They will Help You

Special Free Booklet, "FERTILIZERS," on request.

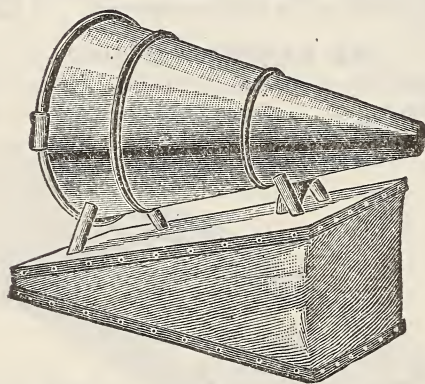


Smokers

Every owner of a hive of bees should have a smoker. A few blasts of smoke will quiet the bees so that they can be handled with safety.



Root's (Improved Corneil.)



Clark's

Honey Knives



BINGHAM Price \$1.80; by mail \$1.85
BINGHAM, steam heated, with tubing.
For description see page 130. Price \$5.50

What Size of Smoker to Select

If one has only a few colonies, and does not expect to have many, he can get along with the Junior. For ten or twenty colonies, and possibly more, he should have nothing smaller than the Standard. If he has fifty or more colonies, by all means have the Jumbo size. Each
Standard 3¼-inch, weight 2 lbs. \$1.60
Jumbo, weight 2½ lbs. 2.00

CLARK'S COLD BLAST

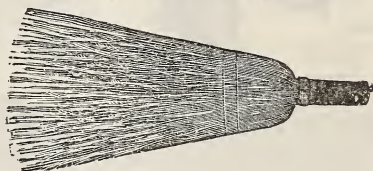
Probably the most popular smoker in use today is the cold blast, although many are now changing to the hot blast, claiming that they are more effective. The Clark is the best low-priced smoker. Weight 1¼ lbs. Price \$1.10

BINGHAM

This is strong and well made, does not clog up, and burns any fuel. It has recently been improved by the addition of a curved snout. The four larger sizes have wide shields; the two smaller have narrow shields. All have wire handle to cone, and inverted bellows. The "Conqueror" and "Doctor" cannot be excelled for use in large apiaries.

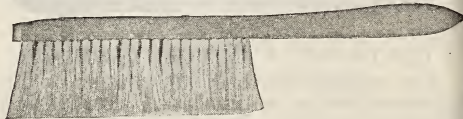
Each
Bingham Little Wonder, weight 1 lb. \$1.10
Bingham Doctor, weight 1½ lbs. 1.50
Bingham Engine, weight 1½ lbs. 2.00

Bee Brushes



COGSHALL'S

For the wholesale brushing of bees off combs when extracting, we do not hesitate to pronounce this the best. Wt. 4 oz. Price, 30c; by mail 35c



HANDY BEE BRUSH

Made of horse hair. One of the very best, most lasting brushes. Weight 7 oz.
Price, 45c; by mail 50c

Books for Bee Keepers

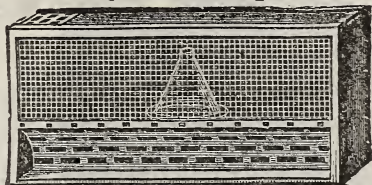
New Edition ABC and
XYZ of Bee Culture

See page 160 for complete list of books and prices.

DANZENBAKER HIVES

We offer a limited quantity of these first class Eastern manufacture at bargain prices, and these with their closed end frames make virtually double walled hives. 10-frame single story K. D. crates of 5, \$8.00; 8-frame single story K. D. crates of 5, \$7.00. Danz Brood Frames, \$5.00 per 100.

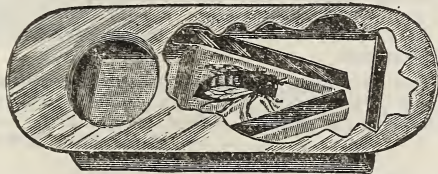
Alley's Combined Drone and Queen Trap



This is placed before the entrance to the hive, and is designed automatically to catch and cage the drones in an apartment by themselves. They can then be carried to another apiary, or be destroyed, as circumstances require. The trap will also catch the queen when a swarm issues, and hold her confined until the apiarist can give her his attention. As she cannot get away, the bees will, in all likelihood, return into the hive. An excellent non-swarving device. Directions for use are attached to each trap. Wt. 1 lb.

IMPROVED WIRE FRONT. Wt. 1½ lbs.
Each, 8 frame \$1.00—10 frame \$1.10

Porter Bee Escape



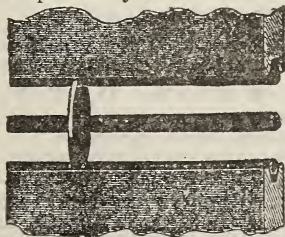
No well regulated apiary can afford to be without bee escapes any more than it can afford to be without a bee smoker. The Porter is very much the best. In taking off the honey it is the greatest labor saver that has been introduced in late years. It avoids "breaking the back" in shaking heavy supers to get the bees out; does away with the cruelty of smoking the bees. There is no need of receiving a single sting, and robbers stand no show whatever. All that is necessary is to slip an escape board between the super and brood nest or main part of the hive (say toward night), on each of the colonies from which you desire to remove the honey.

PRICE, as per illustration, 25c postpaid
Price, mounted on board (Wt. 2¼ lbs.), 70c
Porter's Escape for Honey Houses

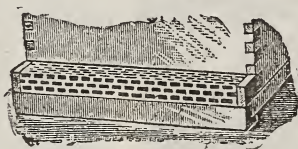
The escape shown above is designed to be used in the hive, but this one is especially made for use on doors and windows of workshops, extracting rooms and other places where bees get in, and it is desirable to get them out without the possibility of their returning. No extracting

room will be complete without one or more of them. Wt. 2 oz. Price, 25c postpaid

NEW STYLE WOOD AND WIRE HONEY BOARD
No sharp edges for the bees to pass over.



Bee Entrance Guards ROOT'S OR TINKER'S



These are to admit workers, and to exclude drones. After the drones are all out, fix the guards over the entrance, and at night the drones can be destroyed. Wt. ¼ lb.

Price, Zinc Front 35c
IMPROVED WIRE FRONT. Wt. 6 oz.
Price, 8 Frame 35c—10 Frame 35c

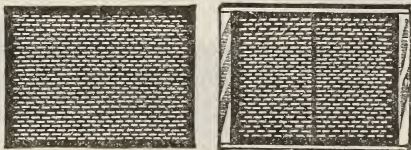
The A B C & X Y Z of Bee Culture

The Largest and Most Complete Work on Bees in the World. The Best Book for all Beekeepers

Every beekeeper, large or small, in town or country, and in whatever part of the world, needs this greatest of all books on beekeeping. It is as intensely interesting as it is practical and useful. It is the first and last word in the apiary. It is up-to-the-hour in all bee matters. It has enjoyed the largest sale of any bee book in any language.

Send us your subscription for
"GLEANINGS" in BEE CULTURE
published monthly. Up to the minute on bee culture. **\$1.00 per year**

Honey Boards



ZINC HONEY BOARDS

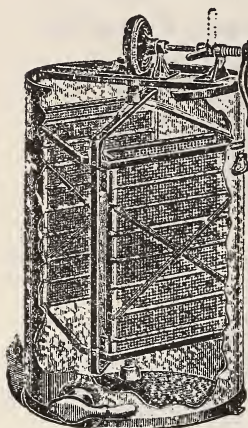
No. 1 or 11 **No. 12 or 13**
ROOT'S OR TINKER'S

Honey boards are used to confine the queen of the brood chamber, and are very generally used in the production of extracted honey. Nos. 1 and 11 are of unbound zinc, and are placed directly on top of the frames. This allows the bees to pass through the holes directly over the spaces between the frames. Nos. 12 and 13 are wood-bound, with a bee space on one side, and reach to the outside of the hive. When placed on the dovetailed or other similar hives there is a bee space above and below the zinc.

PRICES

No. 11. 8-frame, unbound, 12x19½ in. 45c.
No. 1. 10-frame, unbound, 14x19½ in. 50c.
No. 13. 8-frame, wood-bound, 13½x20in. 70c.
No. 12. 10-frame, wood-bound, 16x20 in. 75c.
No. 8. 8-frame, wood and wire, 13½x20 in. 90c.
No. 7. 10-frame, wood and wire, 16x20 in. 1.00
8-frame, 7-wire **Each 1.00**
10-frame, 7-wire **Each 1.10**

Honey Extractors



*Two-frame
Reversible Cowan*

COWAN TWO-FRAME EXTRACTOR

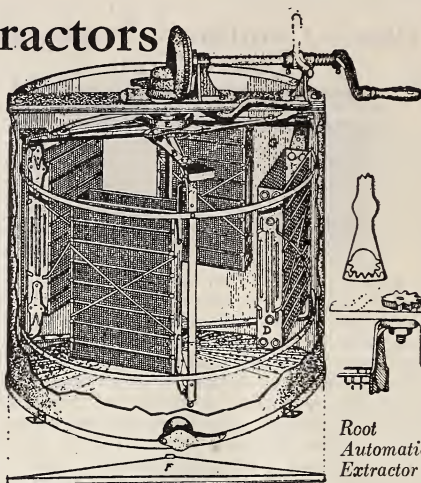
The Cowan Extractor now takes the lead over all others in use, as it is easily reversed. Always the best machine when rapid work is required.

Price \$43.00

NOVICE TWO-FRAME

For any size frame not over 9½ by 18½ inches; not reversible; weight 45 lbs.

Price \$32.50



*Root
Automatic
Extractor*

The NEW ROOT FOUR-FRAME AUTOMATIC EXTRACTORS are fitted with a brake, and a slight pressure, when it comes time to reverse, will turn the pockets, the other side to when they can be speeded up without having to stop the extractor. They reverse instantly without jar or injury. This is a great advantage and an exclusive feature. Has ball bearing and slip gear device. Root Extractors are built for hard service and are the best made. Weight 210 pounds.

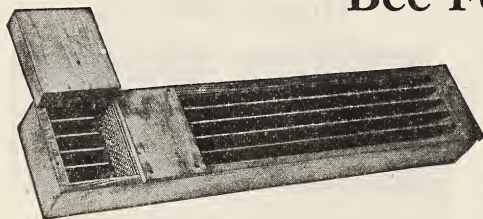
Price, each \$90.00

HATCH WAX PRESS

The most practical and satisfactory wax press, every part being thoroughly tested to withstand the enormous strain placed upon a machine of this type. The quality of the wax is superior to that secured by other methods, and the economy and simplicity of operation makes the Hatch the best press for the average bee keeper.

Price, each \$20.00

Bee Feeders



ALEXANDER FEEDER

This is comparatively a new feeder. The bottom board slides forward, and the feeder is placed at the back and under the hive. The bees go into the feeder from the brood chamber. This feeder has many good features. Wt. 1¼ lbs.

Price, 75c

DIVISION BOARD FEEDER

Made to hang in brood chambers, to one side or between the frames. Wt. 1¾ lbs. **Price 55c**

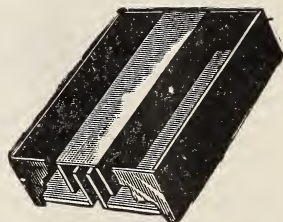
IT PAYS TO FEED BEES

Do not let them go into winter quarters short of stores. Sugar Syrup 2 parts sugar to 1 of water for winter stores, fed in early fall, makes ideal winter feed.

Sugar syrup 1 part sugar to 1 of water, fed to stimulate brood rearing is practical and economical if fed when bees are flying and when no honey can be gathered from outside sources.



Boardman



Miller's Feeder

MILLER'S FEEDER

A superior feeder for feeding colonies their winter stores. It sets on the hive in the same space occupied by a T-super. It measures 12x18½x4½ inches, and will hold about 25 pounds of syrup. When set on the hive it effectually shuts all bees beneath it, and they enter it from below. The syrup is poured in on either or both sides. Wt. 5 lbs.

Nailed up complete, each, \$1.25; in flat, 90c

BOARDMAN'S FEEDER

(See cut). Wt. ½ lb. **Price, without jar, 35c**

HELP YOUR BEES

and increase your profits. Grow crops that are honey producers.

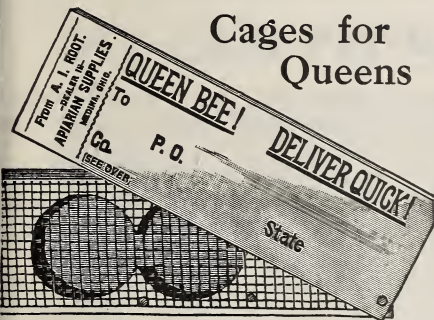
WE CAN TELL YOU WHAT IS BEST

—SEND US YOUR BEESWAX. WE WILL TAKE IT IN TRADE, OR PAY YOU CASH.

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG



Cages for Queens



BENTON CAGE

This is undoubtedly the best cage for mailing and is adapted likewise for introducing. Directions for introducing are printed on the cover. Price, no candy, by mail, 5c each, 100 \$4.50



West Queen-Cell Protector

Complete directions for use accompany each lot of cages. Price each, by mail 15c

SPIRAL CAGES

We also furnish spiral cages to be slipped over these cell protectors, as shown in the cut at the right. They are designed to hold the virgin queen, after she hatches, till she can be disposed of. Price each 15c, 10 by mail \$1.40

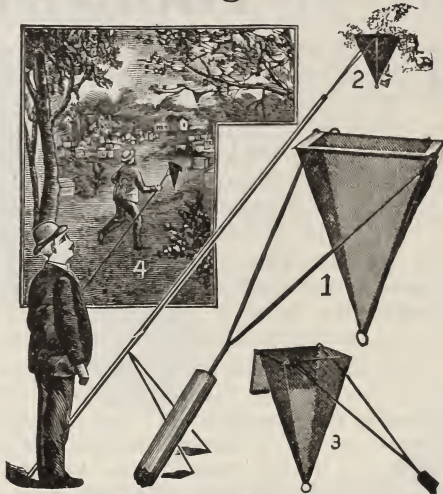
DOOLITTLE CELL PROTECTORS

We can still supply the wire Doolittle Queen-Cell Protectors. Price each, by mail 10c

Root's Queen Rearing Outfit

A complete set of tools and materials, with instructions, enabling one with little experience to rear his own queens at small expense. Price \$6.50

Swarming Device



MANUM'S SWARMING DEVICE

A most complete swarming device. To have a swarm, place the open basket under a cluster of bees, so that when they are shaken from their position they will fall into the basket. Close the lid, and as most of the bees will be inside, they can be carried and emptied into the hive. The swarmer is light and conveniently carried.

Price, wire basket, without pole, bail only, \$2.50. Weight $3\frac{1}{2}$ lbs.

QUEEN BEES

We are in a position to furnish untested Italian queens after the middle of April, weather conditions being favorable. It takes about seven days to get these in from the apiary, so do not expect queens by return mail. Untested Queen. May, June, July, August, September.

Price \$2.00

Tested Queens cannot be furnished before May.

Price each \$2.50



BEGINNERS' OUTFIT

To the inexperienced we recommend the following complete equipment—all that is necessary except the bees—these you can generally purchase near your home and save the express charges. It is best to have them examined by an experienced man to see that the colony is in a healthy condition.

ITALIAN BEES (the leather colored), are to be preferred but any strong colony will do for we can supply pure bred Italian Queens that will soon Italianize the colony as the worker bees live but a short time.

- 1 Copy A B C and X Y Z Bee Culture.
- 1 Fig. 1-8 Western Cedar Hive.
- 1 Clark's Cold Blast Smoker.
- 1 Bee Veil No. 2.
- 1 Parker Foundation Fastener.
- 1 Porter Bee Escape, Mounted.

- 1 Pair Long Canvas Gloves.

"GLEANINGS IN BEE CULTURE"—The best bee magazine—a year's subscription.

PRICE Without Bees \$12.00

F. O. B. Portland

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG



POULTRY SUPPLIES

IN THE following pages we offer everything necessary for the successful production of poultry and you can depend upon the supplies and appliances listed as being the standards in their line.

NEW METHODS of brooding by the use of the Standard Colony Brooder stoves have proven economical and successful, reducing the cost of raising chicks, developing them quickly into sturdy strong growers that make weight more rapidly than chicks brooded under old methods.

WE ARE PIONEERS in the Poultry Supply business in the Northwest, and our Famous Diamond Poultry Foods and Supplies are the standards wherever known. Our Poultry Supply Department is in the hands of trustworthy practical poultrymen—men of experience, who are competent to confer with and advise you on any subject pertaining to the raising of Poultry—a service that is free to you.

IT HAS BEEN STATED, and probably is true, that the average back lot or farm hen lays less than 80 eggs per year, and if that is the case, the owners of such hens are keeping them at a loss of approximately ten dozen eggs per year per hen, as it is now an established fact that by proper selection and care it is easy to produce 200 eggs per year per hen and at no greater expense in time, material or labor than is required to produce the 80 egg average.

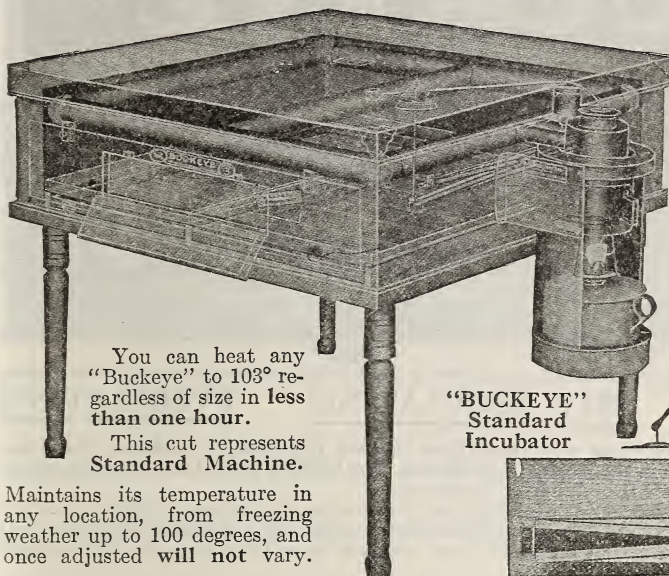
OTHER THINGS BEING EQUAL, a man will usually be more successful with the breed which he likes the best than with another breed, as good or perhaps better, in which he has little or no interest. Nearly all the well-known varieties of the present day are profitable under suitable conditions, and with good care it is not impossible to produce the 200-egg hen from the breed nearest at hand provided it is descended from a heavy egg-laying ancestry. There is no breed of which the hens will all be good layers and maintaining a high degree of efficiency in a flock can only be accomplished by eternal vigilance in weeding out the poor ones and seeing that no detail is overlooked in the care of those retained.

ON PAGE 159 OF THIS CATALOG you will find a list of books and pamphlets on the production and management of poultry, each work having been turned out by an expert in the business. If you would succeed in your chosen business, or pastime, you should make good use of those books. It is possible to economize in equipment without serious loss but it is decidedly unsafe to attempt to buy cheap breeding stock, cheap feeding material or to try to get along without the best books for instruction or reference. The real poultry enthusiast is as energetic and persistent in the study of his literature as he is in the care of his stock, knowing that his greatest success will be attained by keeping abreast of the times and in taking advantage of every short-cut and new discovery which will fit his particular conditions.

ON THE FOLLOWING PAGES you will find a list of poultry foods prepared under formulas worked out by experts of the widest experience, formulas which have stood the test of actual use for over twenty-five years and which, as there is no variation in their food values, have become standardized and are absolutely reliable. It is impossible to produce good poultry with poor food, and as our Diamond Quality Chick Food, Baby Chick Mash, Egg Food, Growing Food, Pigeon Food and All Grain Scratch Food are made in our own mill, under the supervision of our own experts, we know that no better foods can be found in any market at any time at any price. That "the best is always the cheapest" is a proverb which fits poultry raising more closely perhaps than any other line of modern business.

DIAMOND BABY CHICK MASH—We desire to call your attention to our new Baby Chick Mash. GROWS—MATURES—FATTENS. This mash is a milk-equal that prevents bowel trouble, leg weakness and carries them safely through the dangerous first three months. You should give it a good trial.

"BUCKEYE" Hot Water INCUBATORS



You fill the lamp, turn the eggs—and the "Buckeye" will hatch every hatchable egg. No experience needed.

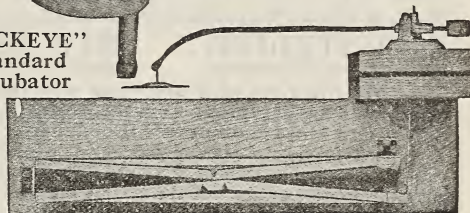
Nearly half a million "Buckeyes" are in operation in all parts of the United States.

You can heat any "Buckeye" to 103° regardless of size in less than one hour.

This cut represents Standard Machine.

Maintains its temperature in any location, from freezing weather up to 100 degrees, and once adjusted will not vary.

"BUCKEYE"
Standard
Incubator



Buckeye Thermostat

READ THE FOLLOWING STATEMENTS FROM THE MANUFACTURER

THE unprecedented success which has followed the Buckeye for twenty-five years is primarily due to the invention of the Buckeye hot-water system, without which that perfect balance between the temperature, moisture and ventilation which is so necessary to successful incubation, would be a physical impossibility. Heating the egg chamber without cooking all the moisture out of the air is responsible not only for the abundant supply of natural moisture but at the same time the soft, radiated heat from the hot water tank provides an absolutely uniform temperature and permits the perfect ventilation of the egg chamber.

■ We guarantee the temperature of every Buckeye we build to be uniform within a fraction of a degree at all times in the egg tray.

The regulation of temperature is purely automatic and needs no watching. You set the regulator when the hatch is started and do not touch it again until the next hatch.

The incubator can be operated in any temperature regardless of sudden changes. Regardless of size or price, we guarantee every Buckeye to work satisfactorily in any temperature down to freezing. No previous incubator experience is required to operate a Buckeye. Outside of filling the lamp and turning the eggs, everything is automatic and requires no attention from the operator.

PRICES AND SIZES OF BUCKEYE INCUBATORS—F. O. B. Portland

Size	Style	Weight	Price	Size	Style	Weight	Price
No. 14—	65-egg, Sgl. wall,	sht.lgs. 55 lbs.	\$18.00	No. 2—	175-egg, Standard...	135 lbs.	\$48.25
No. 16—	120-egg, Sgl. wall.....	85 lbs.	30.75	No. 3—	250-egg, Standard....	200 lbs.	62.50
No. 17—	210-egg, Sgl. wall.....	125 lbs.	40.50	No. 4—	350-egg, Standard....	230 lbs.	73.75
No. 1—	120-egg, Standard.....	110 lbs.	41.00	No. 5—	600-egg, Standard....	325 lbs.	116.00

■ Nothing left to the judgment of operator—that's why a "Buckeye" never goes wrong

EXTRA PARTS FOR BUCKEYE BROODERS

Thermometers (tested).....	\$1.25	Lamp Burners (No. 35).....	\$0.75	Lamp Chimneys.....	\$0.50
Lamp Bowls.....	1.00			Lamp Wicks, per dozen.....	.35

EXTRA PARTS FOR STANDARD BROODERS

Wafer Thermostats.....	\$0.50	Stove Lid.....	\$0.75	Hover Ring.....	\$2.00
Lower Regulator Arms.....	1.00	Check Draft Cover.....	.50	Hook Rod.....	.25
Upper Regulator Arms.....	1.50	Check Draft Protector.....	.50	Gas Burners.....	5.00
Half Grate (plain).....	1.50	Ash Pit Door.....	1.00	Upper Flue Cylinder.....	5.00
Shaker Grate.....	1.50	Ash Pan.....	.50	3-inch pipe for Brooder Stoves,	
Shaker Handle.....	.50	Regulator Bolt with Wing Nut	.20	per length.....	.30
Grate Lock.....	.50	Baffle Plate.....	1.00	Elbows for 3-inch Pipe.....	.25

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG



This is the Famous Original Brooder Stove that has been copied or imitated by every manufacturer of Brooder Stoves

SELF FEEDING

SELF REGULATING

EVERLASTING

Cuts the Cost of Equipment and Operation to Less than Half—Reduces the Time and Labor to Less than a Fourth. Nothing to Break. Nothing to Wear Out. The Simplest, Safest and Most Economical Brooder Ever Invented.

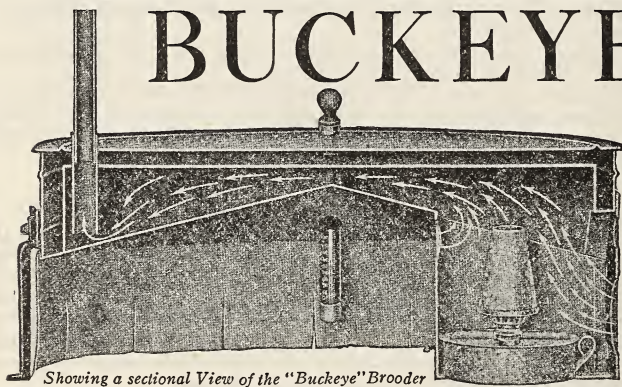
These brooder stoves are efficient and satisfactory in every respect; require but little attention, can be operated anywhere where natural temperature does not fall below freezing; burn hard coal, coke, briquettes or gas; fill the firebox once and shake down the ashes twice a day and they require no further attention.

The Hover is galvanized steel, can be readily raised out of the way when the stove needs attention, has no curtain to wear out or collect dust and will care for any number of chicks from one or two up to full capacity. As the Hover is open all around the ventilation is perfect and the chicks never crowd.

The temperature is regulated automatically by a thermostat attached to the stove and which will hold the temperature within a range of one or two degrees at all times.

Prices:	No. 25—Capacity 1200 Canopy 56 inches. Weight 109 pounds.....	\$34.00
	No. 19—Capacity 1000, Canopy 52 inches. Weight 95 pounds.....	29.50
	No. 18—Capacity 500, Canopy, 42 inches. Weight 75 pounds.....	23.75
	Gas Burner for Brooder Stove.....	5.00

The above includes one length of pipe. Only one length of pipe included with each brooder.



Showing a sectional View of the "Buckeye" Brooder

The Lamp Brooder that broods like a stove Brooder. The chicks hover at the curtain, making crowding impossible.

Note that every particle of air under the hover is drawn from the outside—then up into the upper chamber, where it is discharged through the exhaust tubes. Every particle of impurity is drawn up and out—nothing can come back.

The Portable Lamp Brooders are designed to meet the needs of the poultry raiser who produces only a small number of chicks. It is smaller, more compact and has a capacity up to about 150 chicks.

The body of the brooder is made of galvanized iron and has a lamp chamber which is separate from the space occupied by the chicks. The air is heated by passing around and over the lamp and is distributed equally over the entire brooding chamber. Each brooder is supplied with a thermometer which registers the actual temperature of the brood chamber at all times.

Prices:	Made	No. 20—Diameter 19 inches, 60 chicks.....	\$12.50
	in Three	No. 21—Diameter 22 inches, 100 chicks.....	16.25
	Sizes	No. 22—Diameter 30 inches, 150 chicks.....	20.00

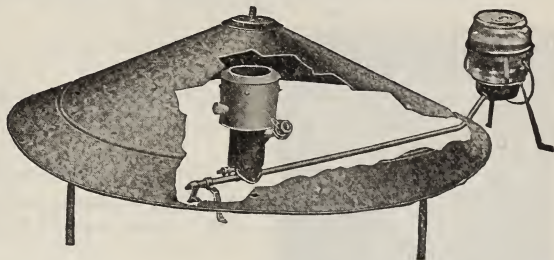
For Prices on extras, such as Lamps, Thermometers, Chimneys, Wicks, etc., see Page 139

THE BUCKEYE "IMPROVED" BLUE FLAME

OIL HEATED COLONY HOVERS

Burns Coal Oil—Has a Clean, Steady Blue Flame that Gives an Abundance of Heat. No Gas Fumes. Safe and Economical.

Regulated with a Wick Guaranteeing a Continuous Oil Supply. Fill the reservoir every 24 hours.



Showing the "Improved" Buckeye Blue-Flame Brooder with a portion of the canopy cut away.

We are placing on the market this season the "IMPROVED" Blue-Flame Brooder which we are confident will prove universally satisfactory.

In the construction of this new brooder valves of every kind have been eliminated. This burner operates on exactly the same principle as the wickless burner used in old models, but instead of feeding the oil through a valve, the oil is fed to the burner by an old-fashioned wick such as everybody understands.

To start the burner, it requires no priming, it is only necessary to open the canopy and apply a match to the wick. The same as you would an ordinary house lamp and it is controlled in precisely the same manner. To secure more heat the wick is turned up and to reduce the heat it is turned down. It requires no special education to operate it.

The efficiency of this brooder is superior to any that we have had the pleasure of handling. It not only produces a great volume of heat, but it does it with a small consumption of oil.

The "IMPROVED" Buckeye Blue-Flame Brooder is positively insured against the clogging of oil or flushing the burner. The large free channels guard against all chances of stopping the oil supply and a continuous supply of heat is therefore assured during every minute of the day or night. Just as long as any oil remains in the reservoir, it will feed to the burner and a system of regulation that cannot go wrong.

These brooders are made in three sizes only and the entire heating system supplied, will be made in one size only; everything the same with exception of the size of the canopy; these are made in the following diameters and are estimated to have the following capacity: No. 27, 200 chicks; No. 28, 350 chicks; and the No. 29 up to 500 chicks and this is the size that we recommend as the extra first cost is but little more than the smaller sizes and it enables you to care for any number up to capacity with practically no additional cost of operation.

If you live where it is hard to obtain a suitable fuel for the Coal Burning Colony Brooder, you surely will make no mistake in the purchase of one of these new "IMPROVED."

SIZES AND PRICES

No. 27—34 inch Hover, wgt. 42 lbs.,	\$18.75
No. 28—42 inch Hover, wgt. 50 lbs.,	22.25
No. 29—52 inch Hover, wgt. 60 lbs.,	24.75

EXTRA PARTS FOR BUCKEYE BLUE FLAME BROODERS No. 11 and 12

No. 134 Vaporizer.....	\$1.00
No. 135 Burner.....	1.50
No. 136 Outside Chimney.....	.75
No. 137 Central Chimney.....	.75

No. 138 Inside Chimney.....	\$0.75
No. 139 Chimney Cap.....	1.00
No. 144 Oil Jug.....	1.00
No. 146 Jug Cap.....	.50

"BUCKEYE" INCUBATORS—PRICE LIST OF EXTRA PARTS

Thermometers for Incubators (tested).....	\$1.00
Thermometer Holders for Incubators.....	.15
Lamp Bowls for all Incubators.....	1.00
Lamp Burner No. 2 (will fit Incubators Style A, B, and C, Standard 110 and Standard 220).....	.50
Lamp Burner No. 35 (will fit Incubators No. 60, No. 1, No. 2, Style E and Style H).....	.75
Lamp Burner No. 50 (will fit Incubators No. 3, No. 4 and No. 5).....	1.00
Lamp Burner No. 3.....	.75
Lamp Chimneys for all Incubators.....	.50
Lamp Wicks for all Burners, per dozen.....	.35
Thermostats for Incubators (metal).....	2.50
Connecting Rod and Nut for all Incubator Regulators.....	.50
Lever for all Incubator Regulators.....	1.00

Brackets for all Incubator Regulators.....	\$0.35
Lamp Support for Standard Incubators.....	2.50
Lamp Hanger for Incubators Styles A, B, C.....	.50
Lamp Hanger for Incubators Styles E and H.....	1.50
Incubator Legs (long).....	.75
Incubator Legs (short).....	.35
Dampers (only) for Incubators.....	.25
Egg Testers.....	.50
Drain Caps for Incubators.....	.25
Filler Caps for all Standard Incubator Tanks.....	.35
Filler Caps for Incubator Lamp Bowls.....	.25
Door Catches for Standard Incubators.....	.25
Underwriters' Lamp Support with Gas Heater Complete.....	4.50

When ordering new tanks for old incubators, the order must be accompanied by the exact dimensions of the tank to be replaced. Diagrams for this purpose will be furnished on application.

When ordering new parts for old incubators, always mention size and design of the incubator.

A large percentage of the agricultural colleges and experiment stations throughout the United States have adopted the Buckeye as the standard incubator, which is a high tribute to any mechanical device.

The BUCKEYE Catalog mailed on request.

Asbestos Lighting rings for the RELIABLE OIL BURNING Brooder, Dozen \$2.00.

FEED your Chickens THE DIAMOND brand of poultry FOODS.

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG

THOROUGHbred POULTRY AND EGGS



COCKERELS and older birds from **\$3.50 up**.

PULLETS and Hens from the finest laying strains ranging in price from **\$1.00 up**

Day Old Chicks



DAY OLD BABY CHICKS—Selected from the finest laying strain of White Leghorns, and other breeds of **HIGH EGG PRODUCTION**.

All chicks guaranteed free from White Diarrhoea at time of shipment, according to O. A. C. standard test.

Deliveries will be made in order received, commencing about the 15th of February, 1923. **ORDER EARLY.**

Write for prices, stating breed and quantity wanted.

Send us your orders for Poultry or Eggs, **any breed or strain**, and secure the advantage of expert, critical selection, that guarantees full value for your money. We do not depend on any one breeder, but can give you the pick of the prize-winning strains at right prices.

Prices depend upon whether or not exhibition birds are wanted. But the following general list gives average prices for **guaranteed thoroughbred stock from recognized fancy strains**

For fancy exhibition stock write us your requirements. **We can fill the bill.**



We have discontinued the handling of eggs for hatching.

NORWICH AUTOMATIC EXERCISER AND FEEDER

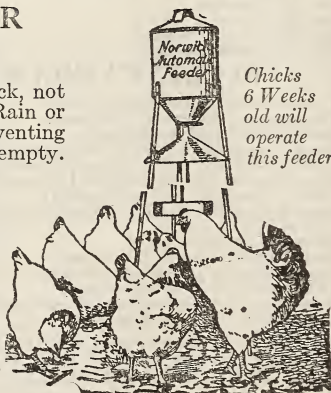
Every kernel of grain put into this feeder will go to your flock, not a single one will be wasted. Absolutely bird and rat proof. Rain or dampness cannot affect it. Saves its cost in ninety days by preventing waste, requires no attention except filling of hopper when empty. Adjustable for slow or fast feeding.

KEEPS THEM BUSY ALL THE TIME

Guaranteed to improve the flock, increase the egg production and save feed. Descriptive pamphlet on request.

MADE OF HEAVY GALVANIZED IRON Each

No. 1—8 quarts.....	\$4.00
No. 2—14 quarts.....	5.25



Chicks 6 Weeks old will operate this feeder

Norwich Dry Mash Hopper

Solves the problem of Automatic Dry Mash Feeding. The vibrator rods make clogging impossible and the construction of feed basin eliminates waste.

Price, 8 qt. capacity, weight 8 lbs., **\$3.75**

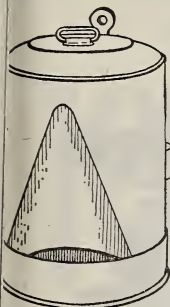
BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG

FEEDERS AND FOUNTS

GALVANIZED WALL FOUNTAIN

No. 5—Something new and serviceable. To be hung on the wall or against an upright post. The patented construction protects the water from becoming soiled. One gallon size, weight 2 lbs. Each 95c

Two-gallon size, weight 2½ lbs. Each \$1.20



No. 12 GALVANIZED IRON FOUNTAINS

Our Galvanized Iron Drinking Fountains, we believe, are the best in use. They are easily filled, cleaned and kept clean. Lighter than the earthenware and safer to ship.

Price—Small size, weight ¾ lb., each 40c; medium size, weight 1 lb., each 50c; large size, weight 1½ lbs., each 75c.



SANITARY STONE FOUNTAIN

These are strong and well finished; made in two pieces. They probably keep the water cooler than the galvanized fountains, but are heavier to handle and more liable to break.

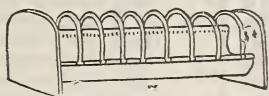
Price—½ gal. 65c; 1 gal. 75c; 2 gal. \$1.25.



No. 7 WIRE COVERED FEEDER

A practical, convenient feeder for young chicks. Durable and easily cleaned. Weight 1 lb.

Price, 12 inches each 50c.



No. 1 "DIAMOND" SANITARY SELF-FEEDING BOXES

Made of heavy galvanized iron; soon pays for itself in preventing waste of feed. Keeps grit, shells and charcoal before the fowls at all times.

Price, 3 compartments, weight 2½ lbs., each \$1.10. Large size, 2 compartments, weight 3 lbs., each \$1.45.

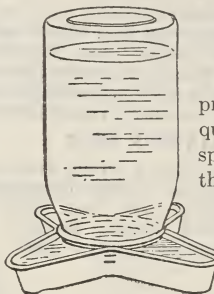


STAR FOUNTS AND FEEDERS

Made of one solid piece of pressed metal, holds a Mason quart jar, has more available space for drinking or feeding than other feeders of this class.

Price, without jar,

Each 10c



CIRCULAR CHICK FEEDER

Made of heavy galvanized iron. The cover fits tight and chicks cannot climb into it.

Convenient and economical. Made in two sizes.

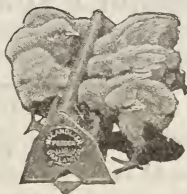
8 holes. Each 15c

12 holes. Each 25c



McCANDLISH IMPROVED CHICK FEEDER

Equipped with Adjustable Partitions for Various Kinds of Feed. An Ideal Drinking Receptacle. Also Made of Galvanized Iron. No Rough Edges. Waste Impossible. Cannot Capsize.



The Revolving Rod Prevents the Chicks from Perching Upon It, Making the Feeder Absolutely Sanitary.

Lengths: 12, 20 and 30 Inches.

PRICES: 40, 50 and 75 cents.

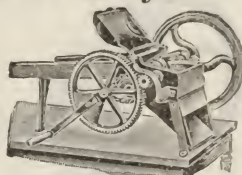
"New Model" Clover Cutter For Poultry

The "New Model" Clover Cutter cuts either green or dry, such growths as clover, alfalfa, vegetable tops, etc., into ½ inch lengths.

The "New Model" is made only of iron and steel, from entirely new patterns. It is a strong feeder, has large capacity, runs unusually easy and will do perfect work indefinitely.

The Cutting Mechanism is the most vitally important part of a Clover Cutter. The radically different construction of the "New Model" admits of perfect cutting at all times, because the cutter bar is adjustable and easily accessible, and the four 7-inch spiral steel knives can readily be removed for sharpening.

Length over all 28½ inches. Weight knocked down 70 pounds.



Removable Steel Knives—Adjustable Cutter Bar—Runs Easy—Cuts Fine—Is Durable.

Price.....\$21.00



MANN BONE CUTTERS

The only mill that will cut Green Bone and not clog

THE Mann's Green Bone Cutter is offered to the poultry world on a warranty to produce a perfectly edible poultry food, with no waste, from any lot of green bones, with less labor, and less annoyance than any other bone cutter.

We send the Mann's to any responsible poultryman with this understanding: If you are not satisfied that it meets every claim we make for it, notify us, and we will give instructions to return the machine, and will, upon receipt of same, **refund purchase price**. Could you ask more?

The Mann's is the only machine which has a self-governing feed, producing uniform pressure against the knife, whether the bone be hard or soft. You set the machine to suit your strength, and it never requires more power than you set it for.

MANN'S No. 5

Has four knives, large solid cylinder, and has the latest patent automatic governing spring feed which makes it one of the best low-priced bone cutters ever offered. We can furnish with crank, balance wheel, or mounted on iron stand.

Mechanism of the Mann's showing automatic force-feed, cylinder parts, etc. Mann's catalog gives all details.

MANN'S No. 7

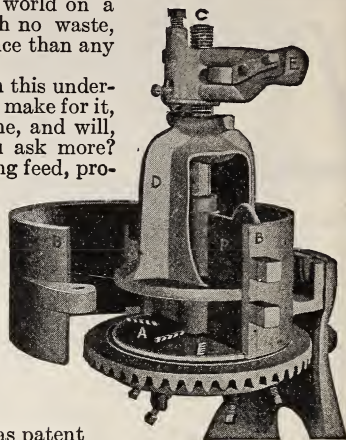
The New No. 7 is mounted on a strong iron stand, and has patent automatic governing spring feed. Large open-hinged cylinder, giving instant access to all working parts, has six knives, gear guard, anti-clog device, heavy balance wheel and other improvements. (See cut.)

MANN'S No. 7½

Adapted to run either by hand or power without any change. The particular advantage of the 7½ is that while it is a complete power machine, it can be operated by hand just as easily as the No. 7. It is recommended even if you have no power, for should you get power you need be at no further expense.

MANN'S No. 9

About the same as No. 7, except that it has a larger cylinder and greater holding capacity, different design and larger table.



MANN'S No. 12—POWER

Strictly a power machine. Capacity 120 to 150 pounds per hour. Horsepower required, one to two. Just the machine for marketmen, extensive breeders, or anyone who has large quantities of bone to cut.

PRICE LIST OF MANN'S BONE CUTTERS

New Styles	Price	Wgt.
No. 5C (with crank handle)...	\$13.50	30
No. 5B (with balance wheel)...	17.75	55
No. 5BM (B.W. and iron stand)...	22.50	80
No. 7 (B.W. and iron stand)...	27.00	107
No. 7½ (hand or power).....	36.00	150
No. 9 (B.W. and iron stand)...	40.50	163
No. 12 (power machine).....	70.00	260
No. 15 (power machine).....	145.00	420

MANN'S HANDSOME 40-PAGE CATALOG

is fully illustrated and tells all about the different style Green Bone Cutters, Clover Cutters, Corn Shellers, Grit Smashers, etc., and contains much valuable information. Free on request.

MANN'S CORN SHELLER

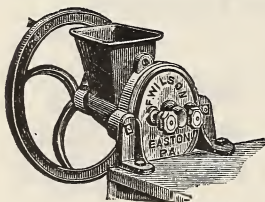
Best low-priced corn sheller made. A profitable tool if you have corn to shell. Weight 10 lbs.

Price \$3.75

MANN'S CAST IRON MORTAR

For breaking glass, crockery ware or oyster shells. Weight 33 lbs.; height 12 inches; 9 inches square; pestle 4 feet long.

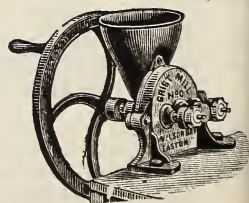
Price \$5.00



WILSON DRY BONE MILL No. 1

This is a practical mill, grinding all kinds of shell, crockery, grit, burnt or dry bone, feed, etc., coarse or fine.

Price \$7.50



WILSON GRIST MILL No. 0

Made for grinding flour, corn meal, etc., and for cracking grain. Weight 30 lbs.

Price \$7.50

Miscellaneous Poultry Supplies—Continued



Kant-Krack Egg Box is specially designed for the safe delivery of valuable eggs for hatching and is a great favorite with poultrymen.

Made of heavy corrugated paper. Only a few seconds work to set the box up, pack it with eggs, and address it. These boxes are light but very strong, being firmly braced, and will stand the weight of several hundred pounds without crushing.

No.	Size	Wt.	Each	Six	Doz.
3	15-Egg	1 lb.	\$0.25	\$1.45	\$2.75
4	30-Egg	1½ lb.	.40	2.30	4.50
5	50-Egg	2 lb.	.60	3.50	6.50

IDEAL PAPER EGG BOXES

Intended for use in delivering eggs to private families. Nicely printed with a blank space for your name and address. Weight 12 lbs. per 100.

Prices—1-dozen size, 20c dozen; \$1.10 per 100; \$10.00 per 1000. Sample box by mail 5c.

LIVE CHICK BOXES

Our Live Chicken Boxes for delivering day-old chicks are safe, economical, convenient. They come in three sizes at the following prices:

25-chick size, each 25c; doz. \$2.50; 50-chick size, each 35c; doz. \$3.50; 100-chick size, each 50c; doz. \$4.75.

Shell—An Egg Necessity

Did you ever stop to think it would be an impossibility for a hen to produce an egg without carbonate of lime to make the shell, to hold it together during formation and add strength thereafter?

Carbonate of lime is readily available from shells grown in salt water.

When fowls are kept on hard or frozen ground, we find small eggs and occasionally a soft-shelled egg is laid. They never fully materialize for the reason there is nothing to hold them together.

Remember, if you want eggs, keep oyster shell constantly before them and feed our "Diamond Egg Food." There is nothing better. Contains all ingredients for making the inside of the egg, acts as a tonic to the fowl, and when used in connection with shell-making material results are certain.

EGG CASES

30-doz. size complete with fillers. Each 85c

Egg Case Fillers

Packed in cases containing fillers for 12 30-doz. cases. Per Case \$3.50

Fillers for 1 30-doz. case. 35c

Fillers.

Each 5c

NEW PARCEL POST EGG CRATE



The Strongest Lightest Egg CARRIER.

You can mail eggs in this crate 150 miles with return of crate for 3¼ cents a dozen. Size—12 doz.

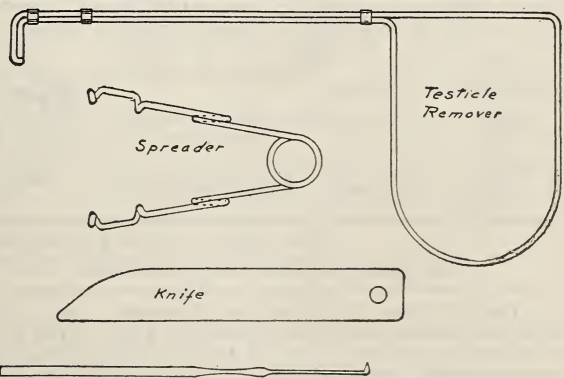
Each, 65c

Diamond Chick Food Saves little chicks. Helps them to grow into big strong healthy birds. See page 148.

VALENTINE'S CAPONIZING INSTRUMENTS

Simple and easily understood by the beginner and enable the expert to do faster and better work than ever before. These instruments make it possible to complete the operation from one side and through one incision, lessening the danger to the fowl and saving more than half the time. Full and complete directions for use, also for care of the fowl before and after the operation.

Price per set, postpaid, \$3.50



Diamond Baby Chick Mash

For little chicks, broilers and roasters. Grows—Matures—Fattens.

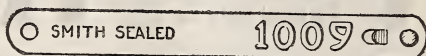


MISCELLANEOUS POULTRY SUPPLIES

LEG BANDS FOR POULTRY AND PIGEONS (SEE CUTS)

Every chicken must have a leg band on before it can be entered in a poultry show. In ordering Leg Bands, be sure to state size wanted, or breed of fowls bands are to be used on, and number wanted or males or females.

CHAMPION—Latest and best adjustable leg band out. Has neat, compact, and smooth fastening, with no catching points; easily attached and absolutely secure. Prices postpaid, 12 for 20c; 25 for 25c; 50 for 40c; 100 for 65c.



SPIRAL COLORED LEG BANDS—Made like a key ring—easy to put on, nothing to catch or tear off—instantly identifies your birds as far as you can see the color. All sizes from chick to mature fowls.

Ten Colors—Red, White, Yellow, Black, Pink, Green, Brown, Purple, Light Blue, Dark Blue. Prices postpaid, 12 for 20c—25 for 25c—50 for 40c—100 for 65c.



SMITH SEALING TOOL

Made especially for sealing the Smith leg bands. Plain jaw \$1.50; lettered jaw, any letter, \$1.75; postage 10c.

THERMOMETERS

FOR INCUBATORS—TESTED

"Buckeye." Tested. Each \$1.00

Fig. 6.—P. S. Co.'s triangle shape; metal back.

Each \$1.00

Fig. 10.—P. S. Co.'s Straight, Metal back. Ea. \$1.00

FOR BROODERS

"Buckeye." For Nos. 20, 21, 22. Each \$1.25

Fig. 2.—P. S. Co.'s; for any style brooder. Ea. \$1.00

HOTBED THERMOMETERS


For taking temperature of soil at varying depths.

No. 3½. Each \$1.50

No. 3. Each \$1.75

All Metal. Each \$2.00

BREEDER'S MAGIC EGG TESTER

 *The Manufacturer's Challenge*—Any person in the world to hatch one egg the Magic Egg Tester registers unhatchable before incubation. No light. No electricity. No expense and lasts a lifetime. Shows the hatchable eggs before incubation.

Don't set another egg until you have the Breeder's Magic Egg Tester. Price each \$2.50

MANDY LEE EGG TESTER—Made to use on lamp, fits No. 2 burner. Price 50c postpaid

SMITH SEALED—Made of aluminum and so constructed that by simply crushing a soft rivet they are sealed on the bird's leg, and must be destroyed to be removed.

Prices postpaid, 12 for 35c; 25 for 60c; 50 for \$1.00; 100 for \$1.85.

SMITH SEALED—Pigeon. Doz. 30c; 100 \$1.00



PETTEY'S POULTRY PUNCH

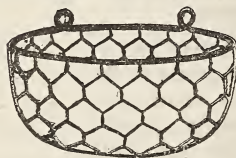
Latest, most convenient Poultry Punch; can be put on a key ring or used for a watch charm. Will not clog. Very practical. Postpaid 25c

RELIABLE POULTRY MARKER

For marking the web between the toes. One of the best and handiest markers. Postpaid 35c

NEST EGGS

China—Best grade Opal Eggs. Weight per dozen ¾ pound. Price—Each 5c; 12 for 50c




WIRE HEN'S NESTS

Strongly made; very durable; fasten to the wall; no harbor for vermin. Weight 10 oz. each. Price each 25c; dozen \$2.75.

We are Agents for the Famous Blatchford's Foods
FOR BLATCHFORD'S CALF MEAL—PIG MEAL—LAMB MEAL, ETC.

Poultry Lice are Expensive Livestock. Keep lice and mites out of your poultry houses by the liberal and persistent use of Lee's Liquid Lice Killer. Spray it on walls, roosts and floors, also on the bottom of the nest boxes under the straw. A supply should be on hand at all times.

 Keep your yards and houses clean and well ventilated—use Germozone in the drinking water—Lee's Liquid Lice Killer.

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG

SPROUTED OATS

INCREASE THE EGG YIELD, DECREASE THE FEED BILL

A Bushel of oats sprouts into three bushels of nutritious green feed. Hens lay more eggs, young chicks, grow faster and are more healthy on green feed. Oats, rye and wheat can be easily and quickly sprouted and make the most economical and profitable food for winter.

PREMIUM SECTIONAL OAT SPROUTERS—All Metal

Outside wall lined with asbestos—inside wall metal grain chamber, heat passing between the walls. One of the principal advantages of the Colfax Sprouter is the very small floor space occupied. If an additional quantity of sprouted grain is needed, owing to an increase in the size of the flock, one or more additional sections may be added, greatly increasing the capacity without in the least enlarging the space occupied.

Small Base— $\frac{1}{4}$ bu., 2 trays, 25-35 hens, weight 25 pounds.....\$11.00
Small Section— $\frac{1}{4}$ bu., 2 trays, 25-35 hens, weight 12 pounds.....3.50

Large Base—1 bu., 2 trays, 100-150 hens, weight 50 pounds.....\$19.50
Large Section—1 bu., 2 trays, 100-150 hens, weight 33 pounds.....7.50

LAMPLESS GRAIN SPROUTERS—Must be used in a heated room

All metal, convenient to drain. Both sprout and root are aerated to promote a healthy growth without mold.

No. L $\frac{1}{2}$ — $\frac{1}{2}$ bu., 4 trays, 50 hens, weight 12 pounds.....\$5.50

No. L1—1 bu., 5 trays, 100 hens, weight 20 pounds.....\$9.00

No. L2—2 bu., 6 trays, 200 hens, weight 35 pounds.....\$13.50

P. S. CO.'S SHIPPING COOPS

These Coops are all wood, neat, very light, but strong. Poultry raisers who are selling poultry at fancy prices should always use these coops to ship their birds in. If your birds are worth shipping at all, they are worth putting in a neat up-to-date coop.

Our prices are very low. Coops always shipped K. D. (in flat), as the freight rate is much lower. Order a few of each size and have them on hand for rush orders. No. 1, for single bird or small pair; No. 2 for large bird or small trio; No. 3 for large trio or pen of small birds.

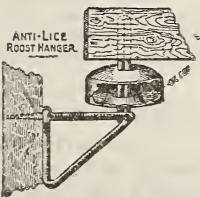
PRICES

	Each	Six for
No. 1—10x21x18.....	\$0.60	\$3.25
No. 2—12x24x20.....	.75	4.00
No. 3—20x24x20.....	1.00	5.25



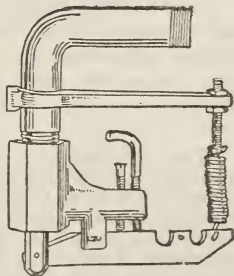
ANTI-LICE

Roost Hanger Screws into the wall. Keep the cup filled with Lee's Lice Killer or kerosene. Price each 25c; pair, 45c; doz. \$2.50.



"GUARANTEED" AUTOMATIC WATER FOUNTAIN

Is the BIGGEST LABOR saver on the farm. Especially designed for poultry, can be attached to any water line, tank or even a barrel. Is operated by the gravity pressure of the drinking pan, supplies fresh water to your fowls automatically.



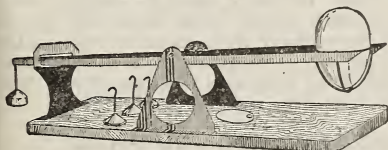
Price \$1.50 each or \$1.60 postpaid

"American" Automatic Water Faucet

Constructed so that water is automatically supplied to the fowls at all times.

Adjustable to any amount desired and can be used with any kind of a trough or bucket. Price \$2.00

GILT EDGE EGG SCALE



Simple in construction and easy to operate, graduating by the ounce per dozen. Is universally used.

Price \$2.00 or \$2.10 postpaid.

THE LINCOLN EGG SCALE

Price 50c or 60c postpaid.

"Diamond Quality" Poultry Foods

DIAMOND Poultry Foods are manufactured from choice, clean, wholesome material. They are made to a standard and are the result of a lifetime of careful study and experiments by a thoroughly practically expert, who is recognized authority on feeding.

DIAMOND CHICK FOOD



A Properly Balanced Ration that will make chicks grow and keep them healthy.

For Young Turkeys, Pheasants and all young fowls DIAMOND CHICK FOOD is unexcelled. The safest, most dependable and satisfactory food.

The select grains that are used in the preparation of Diamond Chick Food are cut by a special process, screened to a uniform size and run through a Fanning Mill to remove the dust and meal, which is the fatalelement in most Chick Foods. After this process the ingredients are carefully weighed and mixed in correct proportions. No guess work.

Diamond Chick Food gives the chicks just what Nature intended they should have, a food composed of grains (cracked), small seeds, bone, etc., mixed in the right proportions to produce a quick and profitable growth without loss.

Diamond Chick Food is so convenient, always ready for use, and you can raise so many more chicks by feeding it that it is the cheapest food you can buy.

Write for Prices.

Our trade mark on every original package is your protection. Demand it of your dealer.

Baby Chicks must have clean, wholesome food. They are sure to thrive on "Diamond."

DIAMOND BABY CHICK MASH

is a veritable chick insurance and is a starting and developing food for chicks without an equal.

**ON THE FIRST MONTH'S FEED
DEPENDS THE FUTURE
RETURNS**

For Early Maturity

After the chicks are a few days old, keep Diamond Baby Chick Mash constantly before them in dry form, just as it comes from the bag, in a feeder which they can get at easily without getting into.



When 48 hours old, and three times a day thereafter, throw into the litter a feed of Diamond Chick Food (allow one pint to every 50 chicks per feed, at first). Feed only as much as they will eat up clean. Also scatter in the litter a handful of chick-size grit once a day for the first few days, then keep a supply in a box or hopper always before them.

Plenty of fresh air, fresh clean water, fresh finely chopped green feed, and table scraps, are essential at all times.

Above all—watch your chicks. Do not overfeed grain or scraps, as the Mash contains every food element necessary for perfect development.

It will, if necessary, keep for months if stored in a cool dry place.

For Early Broilers

Feed exactly as for early maturity, with the addition—when the chicks are three weeks old—of an extra midday feed, every other day, of 50% each of finely ground cornmeal and Diamond Baby Chick Mash moistened into a crumbly mass either with water or sweet skim milk. This with two grain feeds a day, composed chiefly of Diamond Growing Food, will promote a healthy rapid growth.

DIAMOND GROWING FOOD—ALL GRAIN—Write for Prices

For Quickly Developing Little Chicks Into Big Profit-Paying Broilers

Our special formula for promoting a rapid, healthy growth, and should be fed after the third or fourth week; nothing else needed; will quickly produce large, plump "Broilers."

Write for Prices.

ALL PRICES ARE SUBJECT TO MARKET CHANGES WITHOUT NOTICE

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG



Diamond Scratch Food



MADE ONLY BY

PORTLAND SEED CO.,
PORTLAND, OREGON.

Diamond Scratch Food

ALL GRAIN

Complete, economical and satisfactory for every feeding requirements from the three-weeks-old chick to mature fowls.

A perfect "working ration" for fowls. Carefully prepared in correct proportion, a veritable "hen's delight." When fed in conjunction with Diamond Egg Food a scant allowance scattered in the scratching material in the morning keeps the hens busy hunting for the grains. In the evening feed sufficient that hens may go to roost with crops full.

Diamond Scratch Food can be fed to young chicks at three weeks and has every element necessary to hasten normal growth and build up bone and flesh.

A rich nourishing food they greatly relish.

Write for Prices.

Diamond Egg Food

A LAYING MASH

Makes hens lay when eggs are high; keeps poultry healthy. Unequaled for feeding young chicks.

A complete ground food to be fed dry or wet. Starts hens laying and **keeps them at it.** Hastens moulting. Puts poultry in prime condition. Makes young fowls grow fast.

No Drugs—No Stimulants—but a rich, wholesome nourishing food for growing fowls and hens, encouraging rapid growth and increasing egg production. Can be fed dry or as a mash and is the most successful combination of egg producing elements.

Feed **Diamond Egg Food** to the hens in your breeding pens and they will produce eggs of strong vitality that hatch into sturdy, vigorous chicks.

Put up in 100-lb. bags. Full weight.

Write for Prices.

Diamond Egg Food



MADE ONLY BY

PORTLAND SEED CO.
PORTLAND, OREGON

Feeding and Care of Newly Hatched Chicks

Newly hatched chicks, whether incubator or henhatched, should not be fed before removing from the incubator or nest and they must not be removed until the chicks are all hatched and dried. This may be only a few hours or may take a day or two from start to finish. In the meantime, nature provides all the food the chicks need for the first two or three days of their life. Earlier feeding is to be avoided as it frequently causes indigestion. In the case of incubator chicks, it is customary to remove them any time from 24 to 48 hours after hatching. Place them in a brooder already warmed to a temperature of 95 degrees. The assembled chicks will raise this temperature to about 99 or 100 degrees which is right for the first few days. Gradually reduce so that in two weeks it is 90 and in three weeks 80. From then on 80 to 75 degrees is sufficient. This temperature refers to the heat in the hoyer and not the brooder outside of the hoyer. If you have a Buckeye Brooder Stove no attention to the temperature is necessary.

Always keep fine litter or chaff on the floor of the brooder. This should be changed when soiled. Also a plentiful supply of fine hard grit. Chick food can be fed on a board or shingle or in a feeding trough. Hard boiled eggs finely chopped, shells and all, mixed with stale bread provide a splendid meal for a starter. A little Diamond Chick Food scattered in the litter induces exercise and aids digestion. Being a normally balanced ration, it is therefore safer to feed than the home prepared foods. An active chick is a healthy chick.

Feed four or five times a day for the first few days unless the food is in a trough which does away with the need of frequent attention. Both methods have their advocates. The principal thing is to keep the chicks busy scratching. Diamond Chick Food is properly balanced to supply every need of the growing chicks, frame, flesh and feathers. Always ready for immediate use. Saves time and furnishes everything essential for the welfare of the chicks without waste. They will eat it all to the very last morsel.

POULTRY FOODS—Continued

HIGH GRADE MEAT SCRAPS

DIAMOND BRAND, SPECIAL—A new meat product, perfectly prepared, fine ground and clean. The highest feeding value yet produced.

BONE MEAL

Our "Diamond Brand" is finely ground from hard white bones, and of a superior quality. This is used by Poultrymen in their feeding mash for laying hens.

GRANULATED BONE

Our "Diamond Brand" is made from selected hard white raw bones, and of a superior quality; an indispensable food for laying hens. **DIAMOND. Price: 4 lbs. 25c STANDARD. Write for Prices.**


DIAMOND MEAT MEAL

A highly concentrated food. Being cooked meat, dried and ground. Very rich in protein. It should be mixed with the soft food. No hides or tankage in our meat meal, but, as its name implies, meat, cooked, dried and ground¹ unexcelled for egg-production.

DIAMOND CRYSTAL GRIT

Every poultry raiser should keep a supply of grit in each pen. Made in two sizes, chick and hen size. We always send hen size unless otherwise ordered.

DIAMOND BLOOD MEAL

The most highly concentrated egg-producer on the market. To be fed in soft food. Unexcelled as a food for forcing growth of chicks or as an egg food.  **Write for prices.**

ALFALFA MEAL

A substitute for green food for winter feeding. Can be mixed with dry or wet mash.

Write for prices.

SOY BEAN MEAL

Fed same as oil meal. **Price: 3 lbs. 25c**

CHARCOAL

Our Charcoal is prepared especially for poultry; no dust; a good thing for bowel trouble, sour crop and indigestion; a health preserver.

FISH MEAL

A fine-ground, pure, sweet fish meal, containing protein—feed as you would meat meal; a rich, wholesome food for poultry.

OYSTER SHELLS, CRUSHED

We offer nice clean stock, free from dust and waste. These should be within reach of your hens at all times. In two sizes: coarse and fine. **DIAMOND. Oyster. Price: 6 lbs. 25c OREGON. Oyster. 7 lbs. 25c**

PURE POWDERED BUTTERMILK—is the pure solid content of the liquid buttermilk, with only the water taken out and nothing else added.

It contains all the food elements of the liquid buttermilk but the process of drying puts it in a convenient form that will keep indefinitely and can be hauled long distances with only moderate freight charges. Can be used just when needed and with no waste from spoilage or slopping. **Write for Prices.**

ALFALFA LEAVES AND BLOSSOMS

The best substitute for green food for Winter feeding; helps keep the egg basket full; mixed with the soft feed is good for large or small chicks; endorsed by leading experts.

Write for Prices.

POULTRY PEPPER COMPOUND

A good tonic and invigorator; ground.

Price: 1 lb. 25c

OIL MEAL.

Price: 3 lbs. 25c

USE GERMOZONE--Keeps Poultry Healthy


Poultry diseases, even colds and roup, almost always start with bowel trouble. Bowel trouble starts mostly from musty or spoiled food.

Grain, whole or ground, if it becomes damp and lays around for a week or two is apt to become musty, and *musty feed is poison for chickens.*

Germozone Kills or Counteracts the Musty Poison in Food—

And, as a remedy for colds, roup, canker, sore head, swelled head, chicken pox, sores, swellings, loss of feathers, etc., Germozone is unexcelled.

GERMOZONE is the cheapest hen-health insurance one can buy. A 75c package of Tablets will last 20 hens 20 weeks, 400 hens one week, or one hen 400 weeks, or less than 10 cents per year per hen. It means better birds, fewer losses, less worry and trouble, and more eggs.

 **Buy Germozone in the TABLET FORM—no loss from broken or spilled bottles, easier to handle and carries safer in the mail.**

Feed your laying hens plenty of Sunflower Seed. It is a splendid food for them, is cheap, and if you have a small piece of idle land you can produce sufficient seed to feed a large flock through the winter.

Use Sulphur in connection with your fertilizers and make your soil give you the highest possible returns. It is a first class fertilizer, fungicide and insecticide. See page 112.



Blatchford's Calf Meal



The Complete Milk-Equal is in reality a substitute for milk—and should not be considered as an ordinary “feed” or “meal.”

It contains all the elements of milk—a “baby food” for calves.

It is absolutely the **only** milk-substitute that contains in proper proportion the elements necessary for rapid and healthy growth, and the only calf meal that is thoroughly cooked and prepared for easy digestion.

**Sold in 100, 50 and 25-lb. bags
100 Pounds Makes 100 Gallons
of Complete Milk-Equal**

	25 lb. sacks	50 lb. sacks	100 lb. sacks		25 lb. sacks	50 lb. sacks	100 lb. sacks
Calf Meal	\$1.85	\$3.30	\$6.25	Egg Mash	\$1.50	\$2.75	\$5.00
Pig Meal	1.85	3.30	6.25	Chick Mash	1.60	3.00	5.60
Lamb Meal	1.85	3.30	6.25	F.O.B. Portland Subject to Market Changes			

Challenge Brand Condensed Milk Products

Are made from Buttermilk and Skim Milk, cultured. Nothing is added, and only the Water removed by evaporation. Contain 30% solids, and are perfectly soluble.

Keep your flock up to its highest point of efficiency by the regular and continuous use of Challenge Brand. “It’s Cultured”—There’s a Difference.

Also a Valuable Feed for Hogs in Building and Fattening for the Market.

Put up in wooden containers. **PRICES:** 5 gallons \$4.00; 10 gallon keg \$7.00; ½ bbl. \$15.00; bbl. \$25.00. F. O. B. Portland.

LESLIE SALT

Stock and Dairy men, we carry a line of Leslie salt especially adapted for your use. The prepared bricks on account of shape, size and hardness are found to be the most economical method of salting stock.

They come in 5 and 10 lb. cubes but can be cut with a carpenter’s saw into smaller pieces.

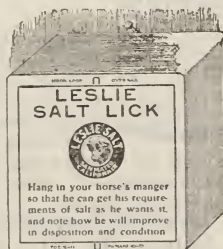
The half ground salt comes in 50 and 100 lb. bags and is found valuable for certain domestic uses.

The Pet Stock fancier will find the Petlick of great value for Rabbits and other pets, all of which need salt.

It comes in round wheel-shaped blocks with a hole in the center so they can be nailed to the wall and eliminates waste. About 2½ inches in diameter.



Prices: Half Ground, 100 lbs.	\$0.85
Half Ground, 50 lbs.50
Comp. Bricks, 10 lbs.20
Comp. Bricks, 5 lbs.15
Petlicks10
Petlicks, pkg. of 1085





LEE'S FOODS AND REMEDIES FOR STOCK AND POULTRY

THE GENUINE MERIT of the LEE FOODS and REMEDIES and their recognized superiority is their best guarantee, and you can depend upon them absolutely to do all that is claimed for them. The valuable booklets of the Lee Company are free to poultry keepers and stockmen, and contain reliable and complete information to date on poultry and stock feeding problems. We mail them on request.

LEE'S LIQUID LICE KILLER

FOR 20 YEARS THE STANDARD

Destroys either by vapor or contact. No trouble to apply; just paint the roosts or wall at night. Rids poultry and houses of all vermin; is prepared exclusively for this purpose, and there is nothing just as good.

Price: Qt. 60c; $\frac{1}{2}$ gal. 90c; gal. \$1.50; 5 gals. \$6.00



LEE'S GERMOZONE

Regular use of Germozone insures BETTER health; BETTER chicks; BETTER layers; and the RIGHT kind of BREEDERS. Use it for Bowel Complaint in little chicks; for Cholera, Roup, and other diseases among the older fowls; and regularly TWICE-A-WEEK for ALL fowls. It prevents contagion, tones the system, and insures BETTER health for the entire flock.

Liquid, not prepaid, 4oz. bottle 40c, 12oz. 75c, 32oz. \$1.50, gal. \$4.50; tablets, postpaid, pkg. 75c

LEE'S EGG MAKER is not a tonic nor a medicine, but a meat food of great value. It will make hens lay, chicks grow, and keep them all in a healthy, vigorous condition.

2-lb. pkg. 50c; 5-lb. pkg. \$1.00; 25-lb. pail \$4.25.

LEE'S HEADLICE OINTMENT—For little chicks. Large box, 15c

LEE'S LOUSE POWDER. 1-lb. can 30c

LEE'S WHITE DIARRHOEA REMEDY—The best medicine for this dangerous disease of little chicks. Wt. 2 lbs.; 12-oz. bottle 50c

LEE'S HOG REMEDY—Cures all diseases of hogs and keeps them healthy.

7 $\frac{1}{2}$ lb. pkg. \$1.50, mailing weight 9 lbs.; 25-lb. pail \$4.00.

LEE'S DIP—For lice, ticks, mange, itch or scab, on cattle, sheep and hogs. Qt. 75c; $\frac{1}{2}$ gal. \$1.25; gal. \$2.00; 5 gals. \$8.00. Mailing weights, qt. 3 lbs.; $\frac{1}{2}$ gal. 5 lbs.; gal. 10 lbs.

LEE'S WORM POWDER—For horses, cattle, sheep and hogs. Safe and sure in result.

Pkg. 35c; weight 1 $\frac{1}{4}$ lbs.

LEE'S BEST CONDITIONER STOCK FOOD—Promotes good health, digestion and assimilation.

7-lb. pkg. \$1.50; 25-lb. pails \$4.50

LEE'S PEERLESS GOPHER KILLER—For killing gophers, squirrels, etc. Sure death. Quart can, wt. 3 lbs., 75c

LEE'S PEERLESS BUG KILLER

Wt. pkd. 2 lbs; 12-oz. bottle 35c

LEE'S SMOKE FLAVOR—Hickory Smoke Extract applied to meat preserves it indefinitely, imparting the delicious flavor that is only otherwise obtained by smoking with green hickory. 12-oz. bottle, wt. pkg. 2 lbs., 50c; 32-oz. bottle \$1.00.

LEE'S FLYO-CURO—We sell thousands of cans of this fly spray every season, and it gives good satisfaction.

Qt. 60c; $\frac{1}{2}$ gal. 90c; gal. \$1.50; 5 gals. \$7.00. Mailing weights, qt. 3 lbs.; $\frac{1}{2}$ gal. 5 lbs.; 1 gal. 10 lbs.



EGG-O-HATCH and EGG-O-LATUM

DON'T GET THE TWO NAMES MIXED

Egg-o-hatch is a dry powder. It is mixed with water and the resulting liquid is applied to eggs two or three times during the 21 days of incubation. It is a liquid that does three things—supplies oxygen for the growing chicks; absorbs carbon dioxide given off; makes more brittle and porous the shell of the egg.

Price 50c postpaid. Will treat 600 eggs.

Egg-o-latium is a white cerate. Rubbed over the shell of the egg it seals every pore so no air, moisture, odors, or germs can get in. Preserves the egg in all its original freshness. The application of Egg-o-latium is easily and quickly done. A dozen a minute and they will keep a year. Fresh eggs must be used, unfertile ones are best. One pkg. treats 50 doz. eggs. Price 50c postpaid



PRICES ON THIS PAGE F. O. B. PORTLAND WHEN NOT OTHERWISE STATED



The National CREAM SEPARATOR



National
No. 26
Separates
Twelve
Gallons
in Ten
Minutes

Ten to
Thirty
Cows

We offer
the
National
in size
No. 26

WHEN YOU BUY A SEPARATOR you want the one that skims the closest, summer or winter; that will handle milk from "stripper" cows; that will produce cream of any desired density.

A durable machine that will give everlasting satisfaction and service, at the minimum cost of up-keep; a separator that is mechanically perfect, having the fewest parts, the greatest capacity for its size, the quickest, cleanest and easiest running.

The National combines all the above and for 24 years has stood the test of time, maintaining its position against all competitors—and many of those first National Separators are in daily use after 20 years of service.

CLEANED IN 3 MINUTES

The superiority of the "National" Cream Separator is due to the marvelous one-piece skimming device, the famous "Vortepoon." Just one cylinder shaped piece of the finest nickel steel, extremely light in weight and large enough for any woman to put her arm through.

A child can clean it in three minutes without risk of breaking or harming it. Just wipe off with a wet rag inside and out, and rinse in hot water and the job is done.

Capacity.—The National is not over-rated but will make perfect separation of the amount of milk claimed under ordinary conditions and have ample reserve capacity.

National Separator for immediate delivery in the following size and price is F. O. B. Portland.

No. 26	Hourly Capacity 600 lbs.	Cows 10 to 30	Shipping Weight 170 lbs.	Price 67.50
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5 per cent. discount
cash with order

Bargains in Discontinued Lines While They Last International Stock and Poultry Foods, Remedies, Etc.

FOR POULTRY AND STOCK

International Poultry Food—Pkgs; 25c wt 2 lbs—50c wt 4 lbs—\$1.00 wt 7 lbs.

International Louse Powder—Weight 2 lbs pkg 25c.

International Lice Paint—60c cans wt 5 lbs—\$1.00 can wt 10 lbs.

International Aseptin—Per box 25c postpaid.

International Rheumatism Oil—Per bottle 20c.

International Sudal—Box 25c postpaid.
Dan Patch Stable Liniment—\$2.00.

Diamond Poultry Remedies

DIAMOND ROUP CURE—Comes in powder form. Full directions in each box. Regular 50c and \$1.00 size.

Special Price, per box, postpaid, 30c and 60c

International Compound Absorbent—\$2.00.

International Gall Cure—25c and 50c.

International Heave Cure—Pkg 35c.

International Distemper Remedy—Pkg 50c.

International Harness Dressing—Price 20c wt 2 lbs—large can 35c wt 3 lbs—5 lbs 75c—10 lbs \$2.00.

International Honey Tar Foot Remedy—35c can wt 2 lbs—75c can wt 3 lbs.

International Colic Cure—50c wt 2 lbs—\$1.00 bottles wt 3 lbs.

DIAMOND CHOLERA CURE—Comes in powder form. Soluble in water. Full directions on each box. Special Price, per box, postpaid, 35c. Regular 60c size.

Conkeys Goods

Poultry Tonic..... Regular 50c size for 40c
Stock Tonic..... Regular 25c size for 20c
Roup Remedy..... Regular 50c size for 40c

Roup Remedy..... Regular \$1. size for 75c
White Diarrhea Remedy.... 25c size for 20c
White Diarrhea Remedy.... 50c size for 40c

BEFORE ORDERING READ CAREFULLY INSTRUCTIONS AND CONDITIONS, PAGE TWO OF CATALOG

SHARPLES CREAM SEPARATORS

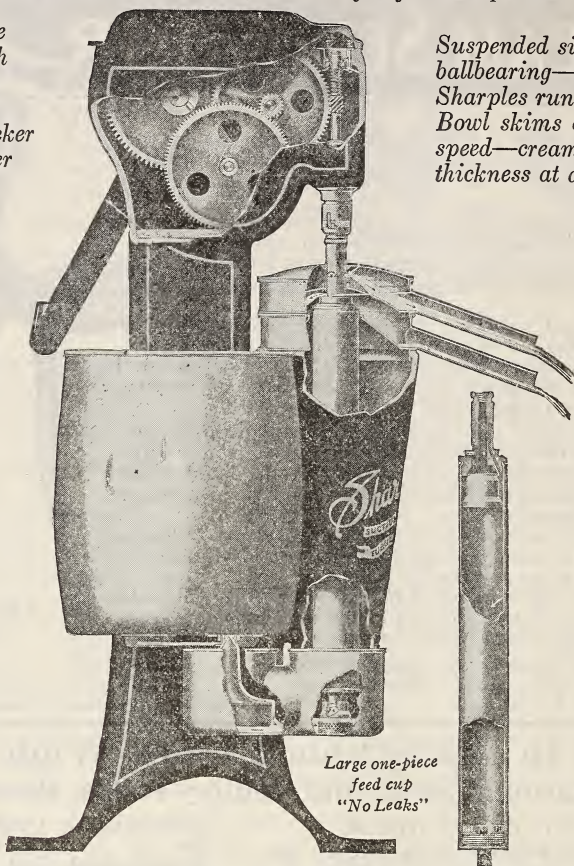
WE are Northwestern Agents for the splendid products of the Sharples Co. Their new "Suction Feed" Separators are the only Separators that will skim clean at any speed and this feature alone guarantees one-fifth more cream than can be saved by any other separator.

*Oil Tight Gear Case
Oil Once a Month*

*The only Separator
which skims quicker
when turned faster
No need to watch
your speed*

*"Suction Feed"
sucks milk
into Bowl
in proportion
to speed—result
clean skim
at any speed*

*The only
Separator
with knee low
Supply Tank*



*Suspended single frictionless
ballbearing—that's why the
Sharples runs easier.
Bowl skims clean at low
speed—cream stays same
thickness at any speed*

*Patented
Tubular
Bowl
creates
double
skimming
force*

*The
Simple
Tube
has no
discs
to wash*

*Large one-piece
feed cup
"No Leaks"*

YOU ARE FAMILIAR with the well-known advantages of the regular Tubular Separator. You know the simple, tube-shaped bowl, with its enormous skimming force (double that of any other machine made)—no discs, easily cleaned, almost indestructible. You know the advantages of having all the gears solidly encased and running in oil. You know how the bowl hangs from a single ball-bearing, spinning naturally, instead of being supported from below.

The "New Sharples" with all these advantages needs only its new features described here of which the most important is the

SUCTION FEED

The milk is drawn up through the bottom of the bowl by the suction force of the revolving bowl—and the greater the speed the faster the separation—But at all speeds the New Sharples Skims Clean—and the cream is of a uniform density—just what you set the cream screw for—and you get all the cream at any speed—fast or slow—and the faster you turn the greater the capacity. This is true of no other separator.

SHARPLES NEW SUCTION FEED SEPARATORS—Retail prices F. O. B. Portland, Oregon Effective December 15th, 1922. Subject to FACTORY change.

Capacity	Price	Capacity	Price
No. 1-C 250 lbs.	\$46.50	No. 4-B 500 lbs.	\$ 87.50
No. 1-B 200 lbs.	57.00	No. 6-B 700 lbs.	102.50
No. 2-B 300 lbs.	67.00	No. 9-B 900 lbs.	127.50
No. 3-B 400 lbs.	77.00	10-Turbine 1000 lbs.	152.50

EQUIPMENT—Speed Governor Pulley, complete for power drive..... \$15.00

Motor and equipment assembled for any size dairy machine, either

A. C. or D. C. Voltage 110 or 200..... 50.00

TERMS—Send references, state amount willing to pay down and payments desired.



KOW-KARE Makes Poor Cows Good
—Good Cows Better, and
Makes More Money for Cow Owners.

"THE HOME COW DOCTOR"

A handbook for cow owners, describing diseases that affect a cow's productivity and telling how to prevent and cure them in a single cow or a whole herd. Free on request.

KOW-KARE (originally Kow Kure) is different from anything ever discovered for cow troubles. It is the only cow medicine that is strictly for cows only. It is not a stock food, but a specific remedy especially for cow diseases, such as Barrenness, Scours, Milk Fever, Caked Udder, Bloating, Red Water, Swelling of Bag, etc. It prevents abortion and removes retained after-birth. It tones up the system, renews vitality, restores appetite to cows that are "off feed," and keeps them healthy. Makes poor cows good, good cows better, and makes more money for cow owners. It increases the milk flow, and enables the cows to produce strong, vigorous calves. It's the dairyman's gold mine, and a sure profit-payer.

Medium cans, Mail. wt. 2 lbs., Price 65c; Large cans, Mail. wt. 4 lbs. \$1.25

AMERICAN DAIRY ASSOCIATION REMEDIES

BAG BALM—A soothing, penetrating ointment for all affections of the bag.
65c packages—wt. ½ lb.

GRANGE GARGET CURE—An unsurpassed and positive cure. 70c cans—wt. 2 lbs.

HORSE COMFORT—For wire cuts and all flesh wounds.

35c bottles wt. 1 lb.—65c bottles wt. 2 lbs.

AMERICAN HORSE TONIC—A general improver for horses.

35c boxes wt. 1 lb.—70c boxes wt. 2 lbs.

Increases Milk Production
20 Per Cent

SO-BOS-SO

Protects Stock From the
Torture of Flies

YOUR cows will give more milk—your horse will do more work on less feed if protected by So-Bos-So at a cost of less than ½ cent a head per day..

Horses hitched or harnessed will stand quietly or work in comfort if protected by So-Bos-So, and many runaways will be avoided. So-Bos-So is a boon to blacksmiths.

So-Bos-So is easily and quickly applied with a hand sprayer, cloth or sponge and is the only really efficient "fly bouncer" that we have ever seen.

Be sure to look for the trade-mark as there are many preparations offered that will prove disappointing.

Prices Gallon cans, wt. 10 lbs., each \$1.50
Half-gallon cans, wt. 5 lbs., each 90c
Quart cans, wt. 3 lbs., each 60c



"MEDICO" Tonic and Worm Destroyer

80% of all stock losses are due to worms—only healthy animals respond to feeding; wormy stock will not thrive—your money is fattening worms

MEDICO DESTROYS the dreaded intestinal and stomach worms and expels them from the system, tones up the digestive tract and keeps them away. Horses, cattle, sheep, hogs, all must have salt. A package of Medico mixed with 70 pounds of salt makes the most perfect medicated salt tonic and worm destroyer possible to obtain, and at a fraction of the cost of such preparations. Keep this salt before your stock, they will use the proper amount to keep them healthy.

PRICE: 5-lb. pkg. Mail. wt. 6 lbs. \$1.85 5 lb. pkg. to 70 lbs. salt

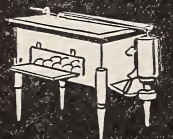


Be sure this Trade Mark is
on the package

Hog Sanitation



Incubators



Dairy



DISINFECTANT — DEODORANT — ANTISEPTIC NOT A POISON

Powerful—By Government method test B-K has over ten times greater germ-killing strength than carbolic acid. Much stronger than coal tar disinfectants—much safer.

Clean—B-K is colorless, leaves no stain on floors or walls.

*Sold on an Absolute Guarantee to
Give Satisfaction or money refunded.*

Prices, boxed for shipment, F. O. B. Portland,
1-gal. jug \$3.00, 5-gal. carboy \$12.50.

Dilutes 1 oz. to the gallon and more according to purpose.

Milking Machines



Spray Barns and Stock



Save Every Calf



Markers for Cattle, Sheep and Hogs

Metal Ear Labels and Ideal Ear Buttons are satisfactory and easily applied marks of identification that are indispensable to breeders and stockmen. Your name and address on one side, numbers on the other.

OVAL EAR PUNCHES—Cattle size; wt. 1¼ lb. each, \$1.75; Sheep and Hog size \$1.40. Postage 10c each.



Metal Band
Ear Marker
and Aluminum
Ear Button



Oval Ear
Punch
also used
to attach
Metal
Band Ear
Markers

Punch
and Pliers
for Alum-
inum Ear
Buttons

Not more than ten large letters can be used on the hog and sheep size; 15 large letters on cattle size or 22 small ones.

Prices	Two sizes	Sheep and Hog	Cattle
100	with name and number.....	\$1.75	\$2.25
50	with name and number.....	1.25	1.50
25	with name and number.....	.85	.90
100	with name only, or No. only..	1.25	1.75
50	with name only, or No. only..	1.00	1.25
25	with name-only, or No. only..	.75	.85

Weight for mailing, Cattle size, 2½ lbs. per 100; Sheep size, 1 lb. per 100.

IDEAL EAR BUTTONS

Pure Aluminum Hardened

Medium size, suits all animals, clinches tight, cannot come out; double strength. Name and address on top side; number on bottom, or number and name can both appear on one side if not more than 18 letters and figures; if more than 18 both sides can be used to the limit of 30 letters and figures. Easily attached with special punch and pliers.

PRICES

25, wt. 3 oz....	\$1.35	500, wt. 4 lbs.	\$16.50
50, wt. ¼ lb....	2.00	1000, wt. 6 lbs..	30.00
100, wt. ¾ lb....	3.75		
Punch and Pliers, wt. 1 lb.....			
\$1.50			

To Positively Stop Hens and Dogs Eating Eggs

Break a small hole at end of egg, shake out about one-fourth of the contents, and then pour in one-half teaspoonful of extract of Gentian. Shake the egg well and stop the hole with paraffin, placing it in the nest where they can get it. Gentian is a very bitter tonic and the taste always stays with them. It is harmless, and one which forever satisfies the taste for eggs.

Incubation Table

This table is correct if temperature of Incubator is kept correct throughout the hatch, but some variation would occur, if for instance the Incubator ran too low, chicks would be a day or two later.

Eggs—Geese—30 days.

Eggs—Turkeys—28 days.

Eggs—Chickens—21 days.

Eggs—Ducks—28 days.

Eggs—Partridges—24 days.

Eggs—Pheasants—25 days.

Eggs—Guinea Hens—25 days.



THEY FIGHT FOR SPRATT'S



SPRATT'S DOG CAKES—10-lb. bags \$1.70: 25-lb. bags \$3.75: 50-lb. bags \$7.25: 100-lb. bags \$14.00.

SPRATT'S PUPPY CAKES—10-lb. bags \$1.70: 25-lb. bags \$4.00: 50-lb. bags \$7.50: 100-lb. bags \$14.50.

SPRATT'S FIBO—10-lb. bags \$1.85: 25-lb. bags \$4.25: 50-lb. bags \$8.25: 100-lb. bags \$16.00

SPRATT'S DOG FOODS AND REMEDIES

We are selling agents for these famous preparations which have the endorsement of the big breeders and fanciers—and are the standard in their line.

We can only list a few items in this catalogue, but will mail free to dog owners "Spratt's Dog Culture" which gives reliable and interesting advice and information on the care of dogs and tells about "Spratt's" preparations.

SPRATT'S DOG SOAP.....30c postpaid

SPRATT'S PUPPY WORM.....60c postpaid

SPRATT'S DOG WORM.....60c postpaid

SPRATT'S CAT WORM.....60c postpaid

BENNETT'S "MILK-BONE"

A Food That All Dogs and Pups Love. Made Bone Shaped.

A clean, wholesome, scientific food that dogs and puppies take to instantly.

30c and 55c package, prepaid

DOGS

COLLIES—Pups—Males \$10.00 to \$25.00 and Females \$5.00 to \$7.50 each.

SHEPARDS—Pups—Males \$7.50 to \$10.00 and Females \$5.00 each.

BOSTON BULLS—Pups—Male and Females \$25.00 to \$50.00.

AIREDALE—Pups—Male \$10.00 to \$35.00 and Females \$10.00 to \$20.00.

FOX TERRIER—Pups—Male \$10.00 to \$15.00 and Females \$7.50 to \$10.00.

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Pair.

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✉ **WRITE US for Fancy Breeds of Pigeons.** We can supply them at right prices.



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Imported and American Canaries

Their cheery song is like sunshine to the soul; their bright plumage, active ways and cheerful dispositions make them great favorites.

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All metal, enameled white, all complete.

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Fine sturdy stock of extra vigor and vitality. Full instructions for care and housing with every purchase.



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A DISTRICT RATE OF 5 CENTS for the **first pound** and **1 cent** for each **additional** two pounds or fraction thereof up to **70 lbs.** (the district weight limit) is charged between points in this district.

First and Second Zones cover a radius of 150 miles from the point of mailing, having a weight limit of **70 pounds** and a rate of **5 cents** for the first pound and **1 cent** for each additional pound, or fraction thereof. The **Third Zone** also has a weight limit of **70 pounds**.

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We have catalogued the weight of most items mailable by Parcel Post and by reference to the table you can always figure your postage.

DAY OLD CHICKS AND BEES cannot be sent **C. O. D.** Parcel Post.

Parcel Post Rates apply to *Seeds, Plants and Books* weighing over 8 ounces. Other fourth-class matter over 4 ozs. is charged at pound rates

Local or District Rate—*Portland Office* and Rural Routes therefrom.....

1st Zone } up to and including a radius of 150 miles from
2nd Zone } the point of mailing.....

3rd Zone.....

4th Zone.....

5th Zone.....

6th Zone.....

7th Zone.....

8th Zone.....

First Pound
or Fraction
Thereof

\$0.05

.05

.06

.07

.08

.09

.11

.12

Each Additional Pound
or Fraction

½ cent

\$0.01

.02

.04

.06

.08

.10

.12

Weight Limit 70 lbs.

Weight Limit 70 lbs.

Weight Limit 70 lbs.

Weight Limit 50 lbs.

Weight Limit 50 lbs.

Weight Limit 50 lbs.

Weight Limit 50 lbs.

Weight Limit 50 lbs.



WAR TAX

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	POUNDS PER ACRE	FERTILIZER TO USE	WHEN TO APPLY
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	100 to 200.....	Nitrate of Soda.....	Fall or Winter preferred, or early spring.
Berry Bushes.....	400 to 800.....	Fruit.....	Fall or Winter preferred, or early spring.
Fruit trees and bushes.....	400 to 800.....	Fruit.....	Fall or Winter preferred, or early spring.
Flower beds.....	See Plants, etc.....		
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Roses, etc.....	½ to 1 lb. per plant.....	Lawn.....	Fall, winter or spring.
Shrubs, trees, etc.....	½ to 3 lbs. per plant.....	Lawn.....	Fall, winter or spring.



For **DIAMOND FERTILIZERS** See Index





**GRADUS
PEAS**

See page 30

